


**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 3

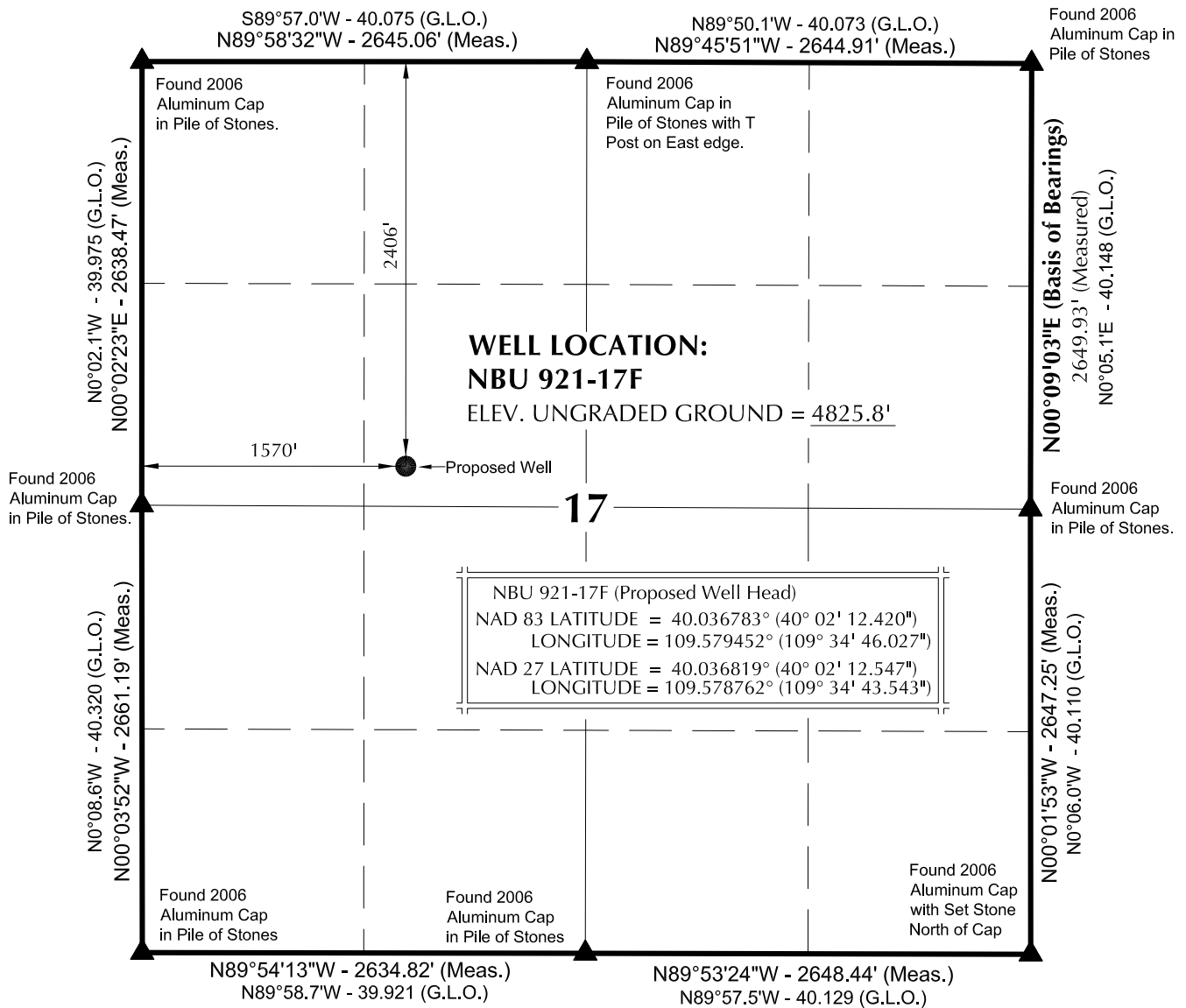
AMENDED REPORT ☐

<b>APPLICATION FOR PERMIT TO DRILL</b>				<b>1. WELL NAME and NUMBER</b> NBU 921-17F		
<b>2. TYPE OF WORK</b> DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>				<b>3. FIELD OR WILDCAT</b> NATURAL BUTTES		
<b>4. TYPE OF WELL</b> Gas Well <input type="checkbox"/> Coalbed Methane Well: NO <input type="checkbox"/>				<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b> NATURAL BUTTES		
<b>6. NAME OF OPERATOR</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.				<b>7. OPERATOR PHONE</b> 720 929-6587		
<b>8. ADDRESS OF OPERATOR</b> P.O. Box 173779, Denver, CO, 80217				<b>9. OPERATOR E-MAIL</b> mary.mondragon@anadarko.com		
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> UTU 0575		<b>11. MINERAL OWNERSHIP</b> FEDERAL <input checked="" type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		<b>12. SURFACE OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input checked="" type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>		
<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>				<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>		
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>				<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>		
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b> Ute Tribe		<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>		<b>19. SLANT</b> VERTICAL <input checked="" type="checkbox"/> DIRECTIONAL <input type="checkbox"/> HORIZONTAL <input type="checkbox"/>		
<b>20. LOCATION OF WELL</b>	<b>FOOTAGES</b>	<b>QTR-QTR</b>	<b>SECTION</b>	<b>TOWNSHIP</b>	<b>RANGE</b>	<b>MERIDIAN</b>
<b>LOCATION AT SURFACE</b>	2406 FNL 1570 FWL	SE	17	9.0 S	21.0 E	S
<b>Top of Uppermost Producing Zone</b>	2406 FNL 1570 FWL	SE	17	9.0 S	21.0 E	S
<b>At Total Depth</b>	2406 FNL 1570 FWL	SE	17	9.0 S	21.0 E	S
<b>21. COUNTY</b> UINTAH		<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 1570		<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 1600		
		<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 700		<b>26. PROPOSED DEPTH</b> MD: 10600 TVD: 10600		
<b>27. ELEVATION - GROUND LEVEL</b> 4826		<b>28. BOND NUMBER</b> WYB000291		<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> Permit #43-8496		
<b>ATTACHMENTS</b>						
<b>VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES</b>						
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER			<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN			
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)			<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER			
<input type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)			<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP			
<b>NAME</b> Danielle Piernot		<b>TITLE</b> Regulatory Analyst		<b>PHONE</b> 720 929-6156		
<b>SIGNATURE</b>		<b>DATE</b> 12/10/2009		<b>EMAIL</b> danielle.piernot@anadarko.com		
<b>API NUMBER ASSIGNED</b> 43047508530000		<b>APPROVAL</b>  Permit Manager				

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Prod	7.875	4.5	0	10600		
Pipe	Grade	Length	Weight			
	Grade HCP-110 LT&C	1000	11.6			
	Grade I-80 Buttruss	9600	11.6			

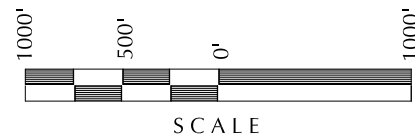
Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	11	8.625	0	2765		
Pipe	Grade	Length	Weight			
	Grade I-80 LT&C	2765	28.0			

# T9S, R21E, S.L.B.&M.



## NOTES:

- ▲ = Section Corners Located
- 1. Well footages are measured at right angles to the Section Lines.
- 2. G.L.O. distances are shown in feet or chains.  
1 chain = 66 feet.
- 3. Bearings are based on Global Positioning Satellite observations.
- 4. Basis of elevation is Tri-Sta "Two Water" located in the NW  $\frac{1}{4}$  of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.



## SURVEYOR'S CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR  
 REGISTRATION No. 362251  
 STATE OF UTAH

**Kerr-McGee Oil & Gas Onshore, LP**  
 1099 18th Street - Denver, Colorado 80202

## WELL PAD - NBU 921-17F

**NBU 921-17F**  
**WELL PLAT**  
**2406' FNL, 1570' FWL**  
**SE  $\frac{1}{4}$  NW  $\frac{1}{4}$  OF SECTION 17, T9S, R21E,**  
**S.L.B.&M., UTAH COUNTY, UTAH.**



**609 CONSULTING, LLC**  
 371 Coffeen Avenue  
 Sheridan WY 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

## TIMBERLINE

ENGINEERING & LAND SURVEYING, INC.  
 209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365

DATE SURVEYED: 04-14-09	SURVEYED BY: D.J.S.	SHEET NO: <b>1</b> 1 OF 9
DATE DRAWN: 04-15-09	DRAWN BY: M.W.W.	
SCALE: 1" = 1000'	Date Last Revised:	



**NBU 921-17F**

Surface: 2,406' FNL 1,570' FWL (SE/4NW/4)  
Sec. 17 T9S R21E

Uintah, Utah  
Mineral Lease: UTU 0575  
Surface Owner: Ute Indian Tribe  
Operator: Kerr-McGee Oil & Gas Onshore LP

**ONSHORE ORDER NO. 1**

***DRILLING PROGRAM***

1. – 2. **Estimated Tops of Important Geologic Markers:**  
**Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:**

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 – Surface	
Green River	1,754'	
Birds Nest	2,046'	Water
Mahogany	2,561'	Water
Wasatch	5,171'	Gas
Mesaverde	8,284'	Gas
MVU2	9,217'	Gas
MVL1	9,734'	Gas
TD	10,600'	

3. **Pressure Control Equipment** (Schematic Attached)

*Please refer to the attached Drilling Program.*

4. **Proposed Casing & Cementing Program:**

*Please refer to the attached Drilling Program.*

5. **Drilling Fluids Program:**

*Please refer to the attached Drilling Program.*

6. **Evaluation Program:**

*Please refer to the attached Drilling Program.*

**7. Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 10,600' TD, approximately equals 6,604 psi (calculated at 0.62 psi/foot).

Maximum anticipated surface pressure equals approximately 4,272 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

**8. Anticipated Starting Dates:**

*Drilling is planned to commence immediately upon approval of this application.*

**9. Variances:**

*Please refer to the attached Drilling Program.*

*Onshore Order #2 – Air Drilling Variance*

*Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2*

- *Blowout Prevention Equipment (BOPE) requirements;*
- *Mud program requirements; and*
- *Special drilling operation (surface equipment placement) requirements associated with air drilling.*

*This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.*

*The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.*

*More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.*

***Background***

*In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.*

*Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found*

*competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.*

*The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.*

*KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.*

#### ***Variance for BOPE Requirements***

*The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.*

#### ***Variance for Mud Material Requirements***

*Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.*

#### ***Variance for Special Drilling Operation (surface equipment placement) Requirements***

*Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.*

*Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.*

*Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see*

*attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.*

*Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.*

***Variance for FIT Requirements***

*KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). The air rig operation utilizes a 5M BOPE when drilling. This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.*

***Conclusion***

*The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.*

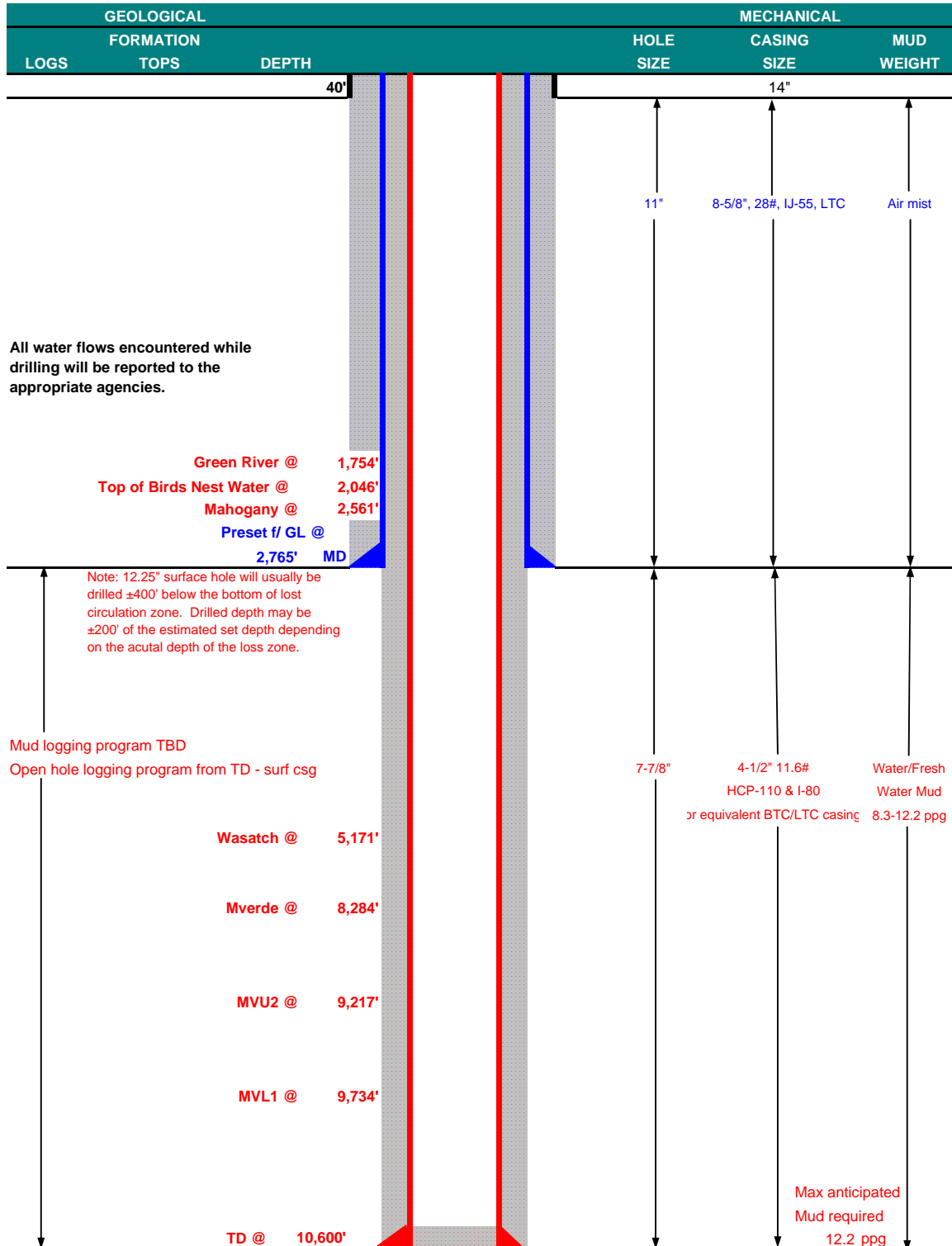
**10. Other Information:**

*Please refer to the attached Drilling Program.*



**KERR-McGEE OIL & GAS ONSHORE LP**  
**DRILLING PROGRAM**

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP				DATE	December 10, 2009			
WELL NAME	NBU 921-17F				TD	10,600' MD/TVD			
FIELD	Natural Buttes		COUNTY	Uintah	STATE	Utah		FINISHED ELEVATION	4,824'
SURFACE LOCATION	SE/4 NW/4	2,406' FNL	1,570' FWL	Sec 17	T 9S	R 21E	BHL Straight Hole		
	Latitude: 40.036783		Longitude: -109.579452		NAD 83				
OBJECTIVE ZONE(S)	Wasatch/Mesaverde								
ADDITIONAL INFO	Regulatory Agencies: BLM (MINERALS), Ute Tribe (SURFACE), UDOGM, Tri-County Health Dept.								





## KERR-McGEE OIL & GAS ONSHORE LP

### DRILLING PROGRAM

#### CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'				3,390	1,880	348,000
SURFACE	8-5/8"	0 to 2765	28.00	IJ-55	LTC	0.77*	1.45	4.49
						7,780	6,350	278,000
PRODUCTION	4-1/2"	0 to 9600	11.60	I-80	BTC	1.77	1.04	2.78
						10,690	8,650	279,000
		9600 to 10600	11.60	HCP-110	LTC	2.43	1.29	29.56

\*Burst on surface casing is controlled by fracture gradient as shoe with gas gradient above.

D.F. = 1.95

1) Max Anticipated Surf. Press.(MASP) (Surf Csg) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac grad x TVD of next csg point))

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.2 ppg)

0.22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**MASP 4,272 psi**

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

(Burst Assumptions: TD = 12.2 ppg)

0.62 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**MABHP 6,604 psi**

#### CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	215	60%	15.60	1.18
			+ 0.25 pps flocele				
Option 1							
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	260	0%	15.60	1.18
			+ 2% CaCl + 0.25 pps flocele				
			Premium cmt + 2% CaCl				
SURFACE		<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>					
Option 2	LEAD	2,265'	Prem cmt + 16% Gel + 10 pps gilsonite	210	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOC				
	TAIL	500	Premium cmt + 2% CaCl	150	35%	15.60	1.18
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	4,670'	Premium Lite II + 0.25 pps celloflake +	380	40%	11.00	3.38
			5 pps gilsonite + 10% gel '+' 1% Retarder				
	TAIL	5,930'	50/50 Poz/G + 10% salt + 2% gel	1,450	40%	14.30	1.31
			+ 0.1% R-3				

\*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

\*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

#### FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.
PRODUCTION	Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint for a total of 15 bow spring centralizers.

#### ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.

Most rigs have PVT Systems for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:

John Huycke / Emile Goodwin

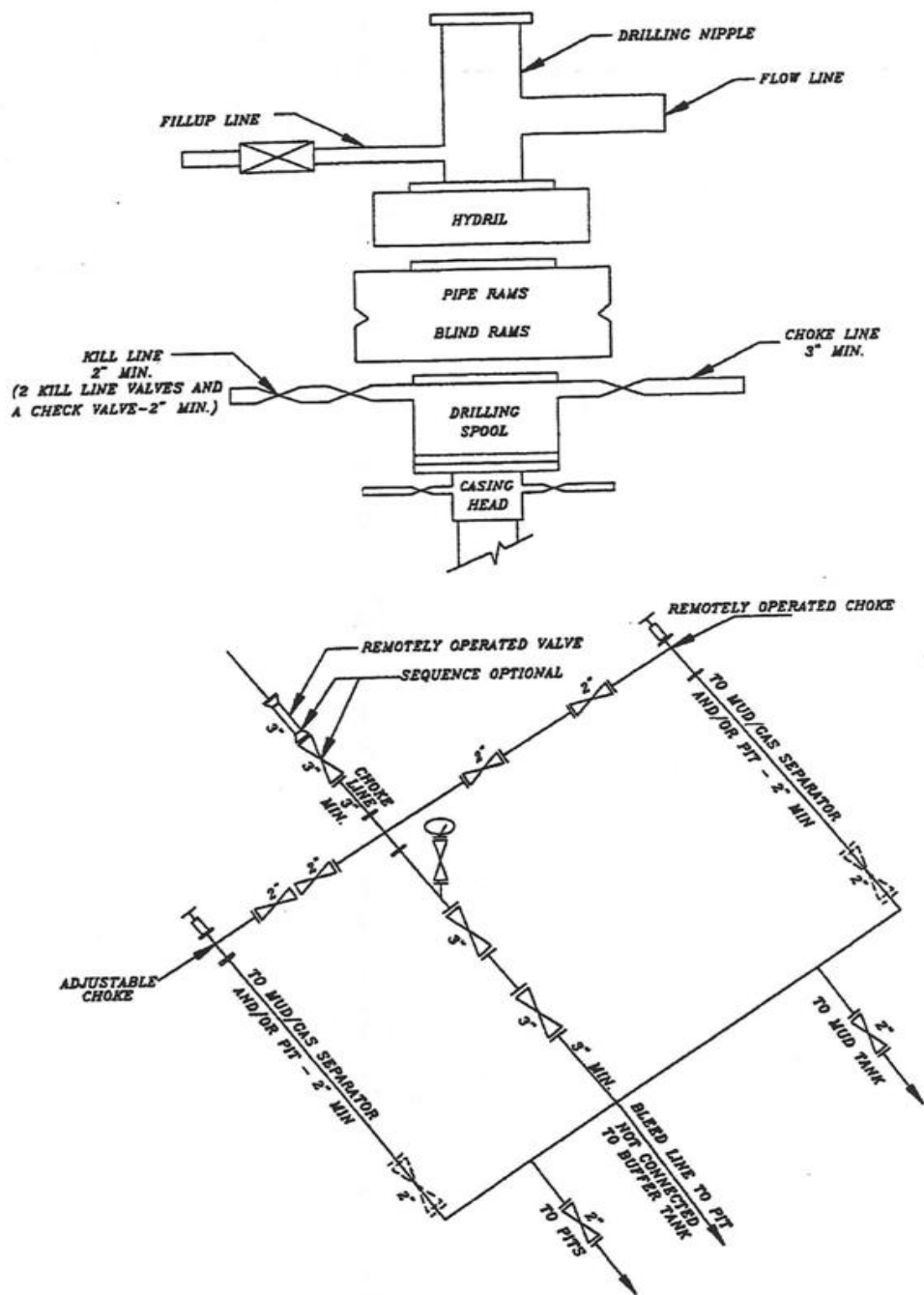
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DRILLING SUPERINTENDENT:

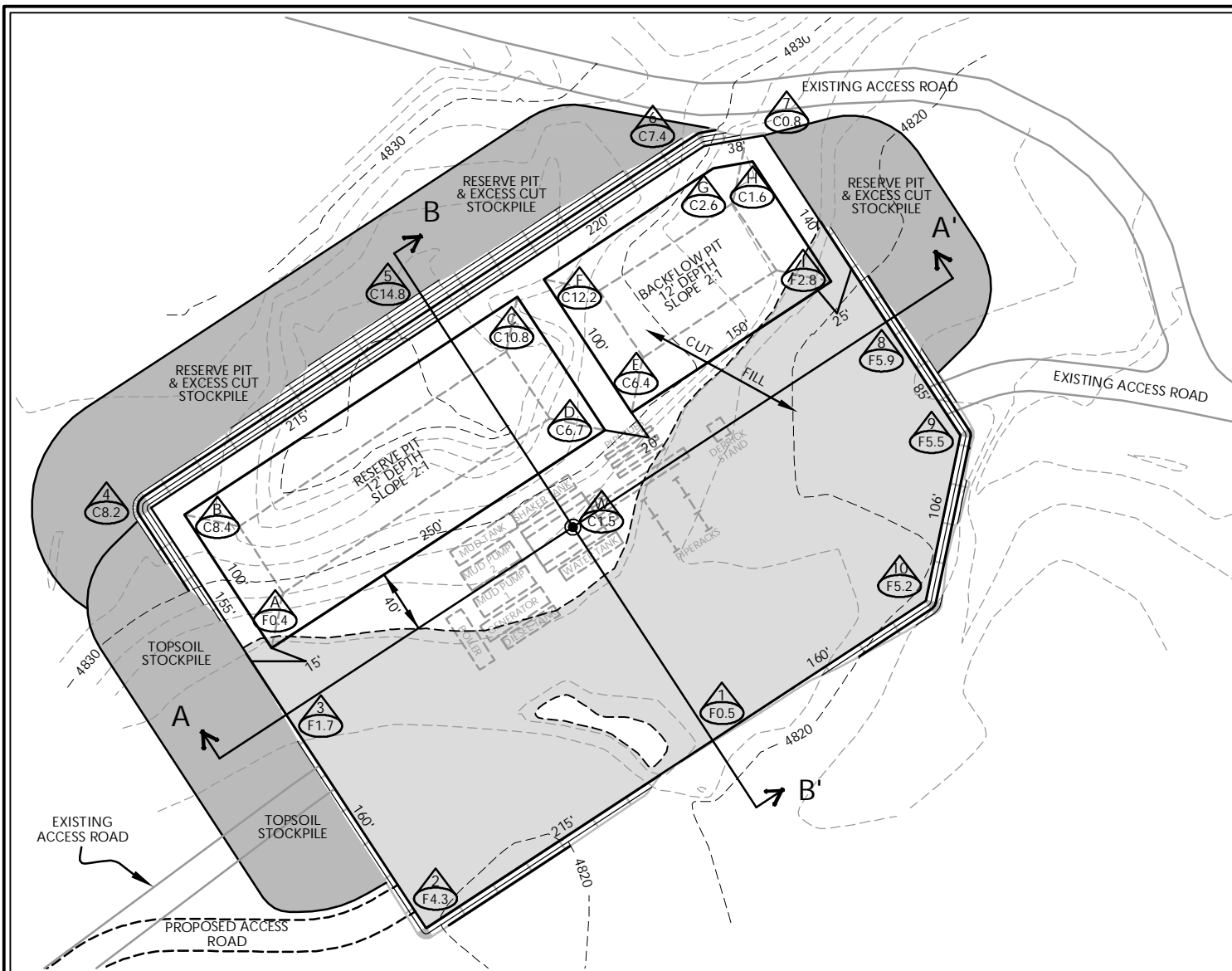
John Merkel / Lovel Young

DATE:

# EXHIBIT A NBU 921-17F

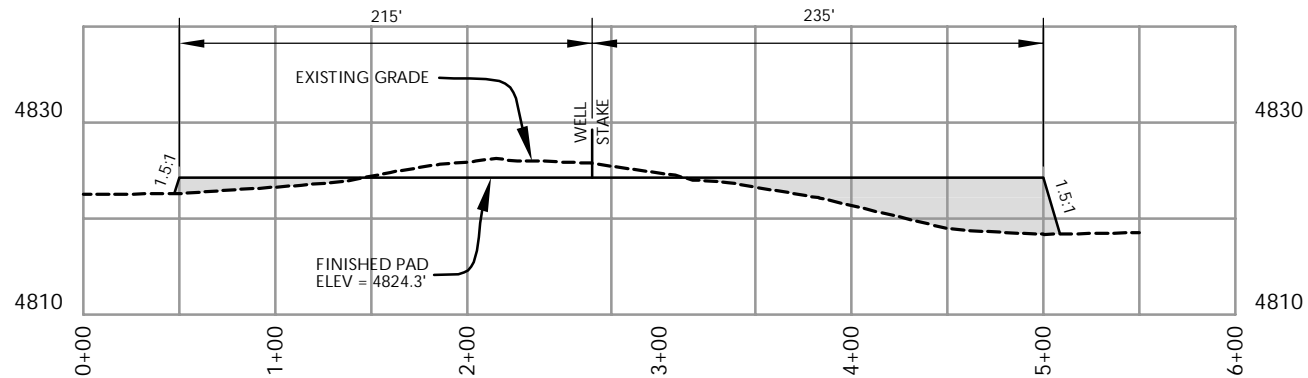


SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

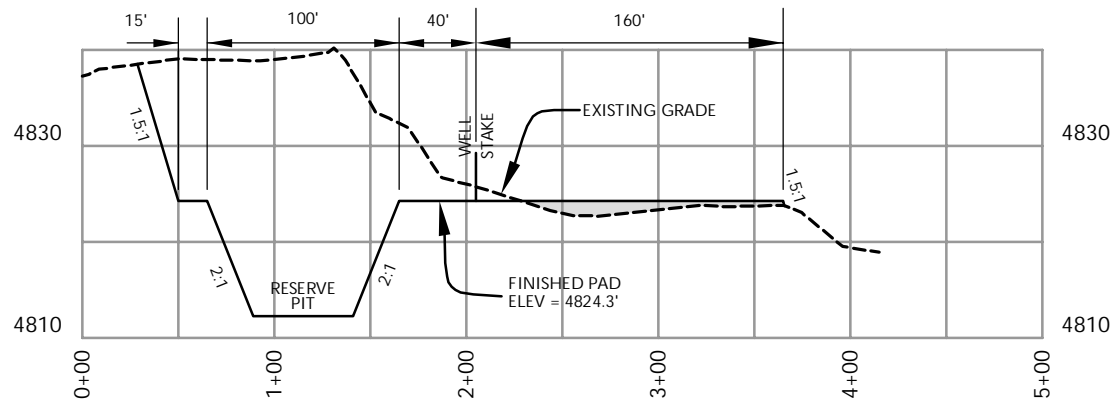


**TIMBERLINE** (435) 789-1313  
**ENGINEERING & LAND SURVEYING, INC.**  
 209 NORTH 300 WEST - VERNAL, UTAH 84078





CROSS SECTION A-A'



CROSS SECTION B-B'

Kerr-McGee Oil & Gas Onshore, LP  
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 921-17F

WELL PAD - CROSS SECTIONS  
NBU 921-17F

2406' FNL, 1570' FWL  
SE1/4 NW1/4 OF SECTION 17, T.9S., R.21E.  
S.L.B.&M., UINTAH COUNTY, UTAH



CONSULTING, LLC  
371 Coffeen Avenue  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

Scale: 1"=100'

Date: 4/20/09

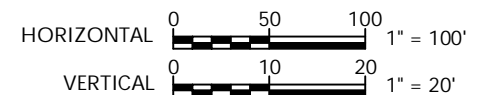
SHEET NO:

3

3 OF 9

REVISED:

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10/7/09



**TIMBERLINE** (435) 789-1365  
**ENGINEERING & LAND SURVEYING, INC.**  
209 NORTH 300 WEST - VERNAL, UTAH 84078

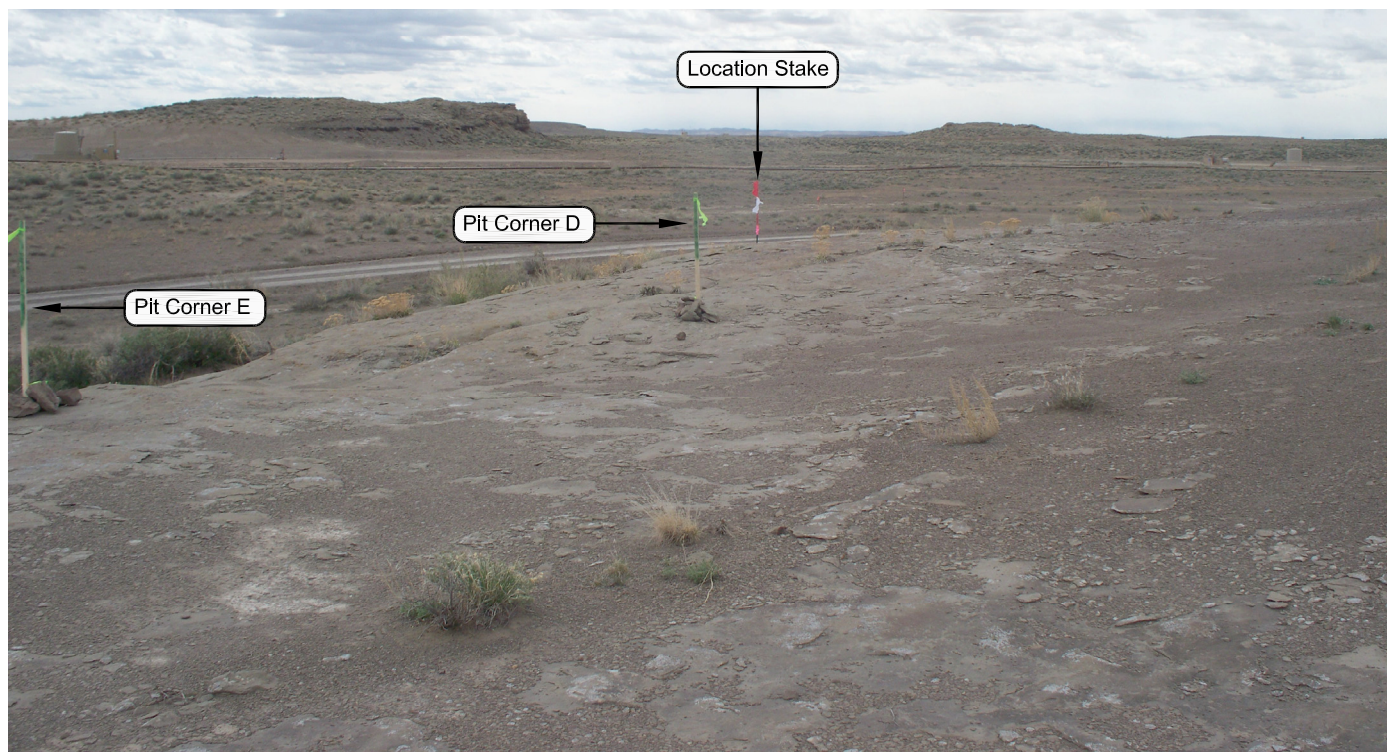


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: SOUTHERLY



PHOTO VIEW: FROM EXISTING ROAD TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**Well Pad - NBU 921-17F**

**NBU 921-17F  
LOCATION PHOTOS  
2406' FNL, 1570' FWL  
SE  $\frac{1}{4}$  NW  $\frac{1}{4}$  OF SECTION 17, T9S, R21E,  
S.L.B.&M., UINTAH COUNTY, UTAH.**



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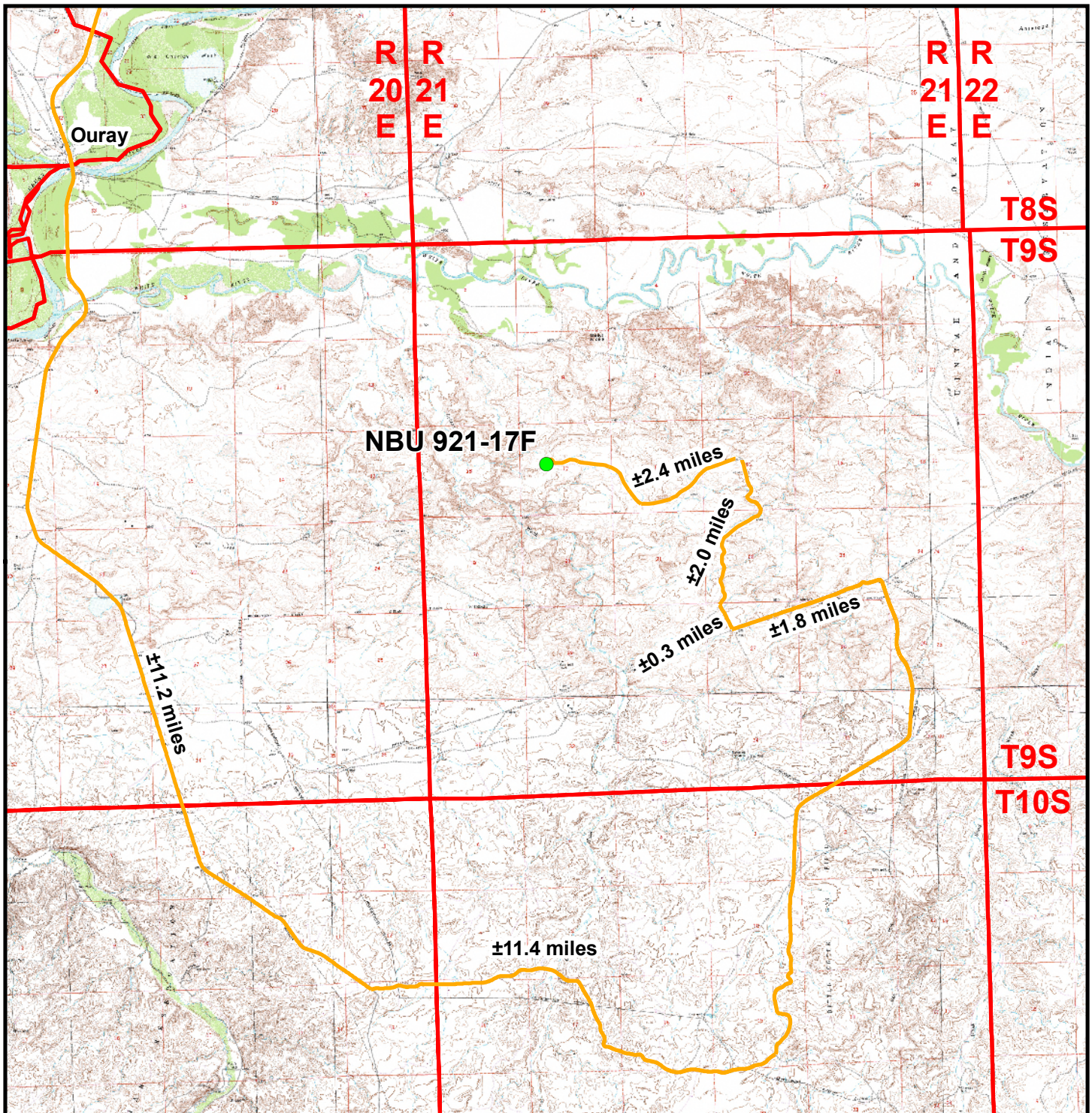
**TIMBERLINE**

(435) 789-1365

**ENGINEERING & LAND SURVEYING, INC.**  
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 04-14-09	PHOTOS TAKEN BY: D.J.S.	<b>4</b> 4 OF 9
DATE DRAWN: 04-15-09	DRAWN BY: M.W.W.	
Date Last Revised:		





### Legend

- Proposed NBU 921-17F Well Location
- Access Route - Proposed

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

**Well Pad - NBU 921-17F**

**NBU 921-17F**

**Topo A**

**2406' FNL, 1570' FWL**

**SE¼ NW¼, Section 17, T9S, R21E**

**S.L.B.&M., Uintah County, Utah**



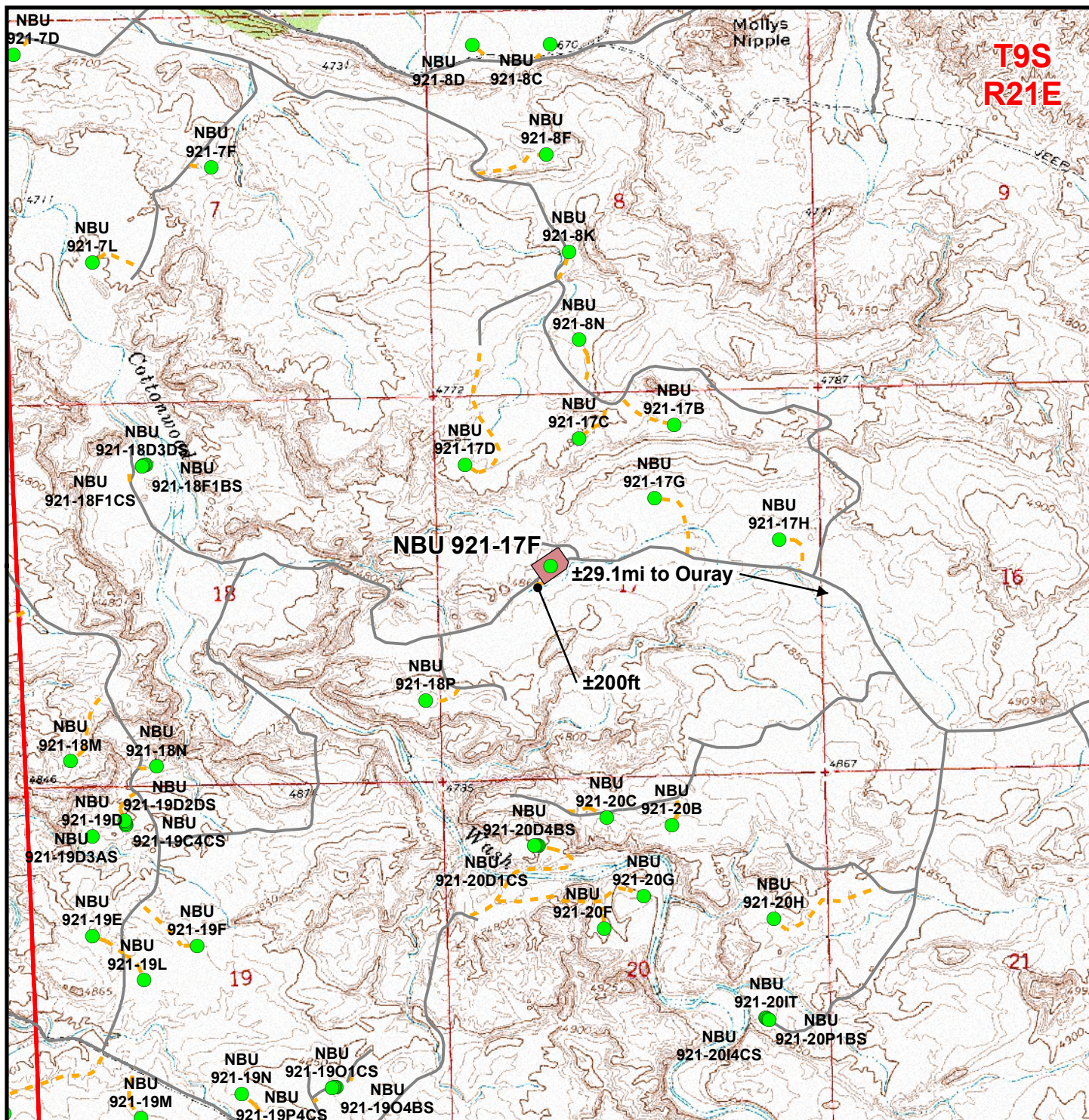
<b>Scale:</b> 1:100,000	<b>NAD83 USP Central</b>
<b>Drawn:</b> JELO	<b>Date:</b> 13 April 2009
<b>Revised:</b> TL	<b>Date:</b> 6 Oct 2009

**Sheet No:**

**5**

**5 of 9**





### Legend

- Well - Proposed
- Well Pad
- Road - Proposed
- Road - Existing

Total Proposed Road Length: ±200ft

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

**Well Pad - NBU 921-17F**

**NBU 921-17F**

**Topo B**

**2406' FNL, 1570' FWL**

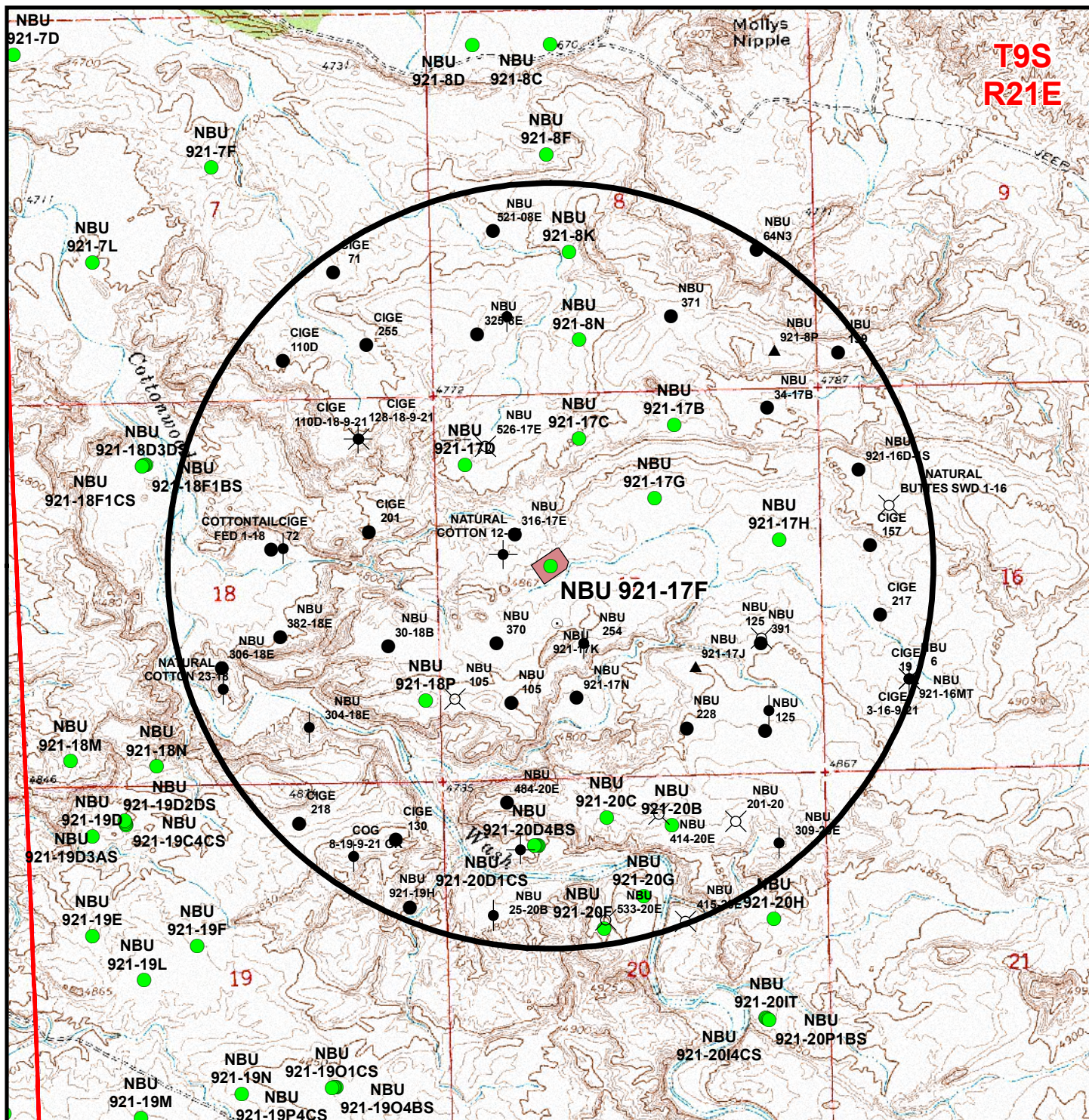
**SE¼ NW¼, Section 17, T9S, R21E**

**S.L.B.&M., Uintah County, Utah**



Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: JELO	Date: 13 April 2009	<b>6</b> 6 of 9
Revised: TL	Date: 6 Oct 2009	





### Legend

- Well - Proposed
- Well - 1 Mile Radius
- Producing
- ▲ Approved permit (APD); not yet spudded
- Spudded (Drilling commenced: Not yet complete)
- ✕ Location Abandoned
- Shut-In
- Well Pad
- Temporarily-Abandoned
- Plugged and Abandoned

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

**Well Pad - NBU 921-17F**

**NBU 921-17F**

**Topo C**

**2406' FNL, 1570' FWL**

**SE¼ NW¼, Section 17, T9S, R21E**

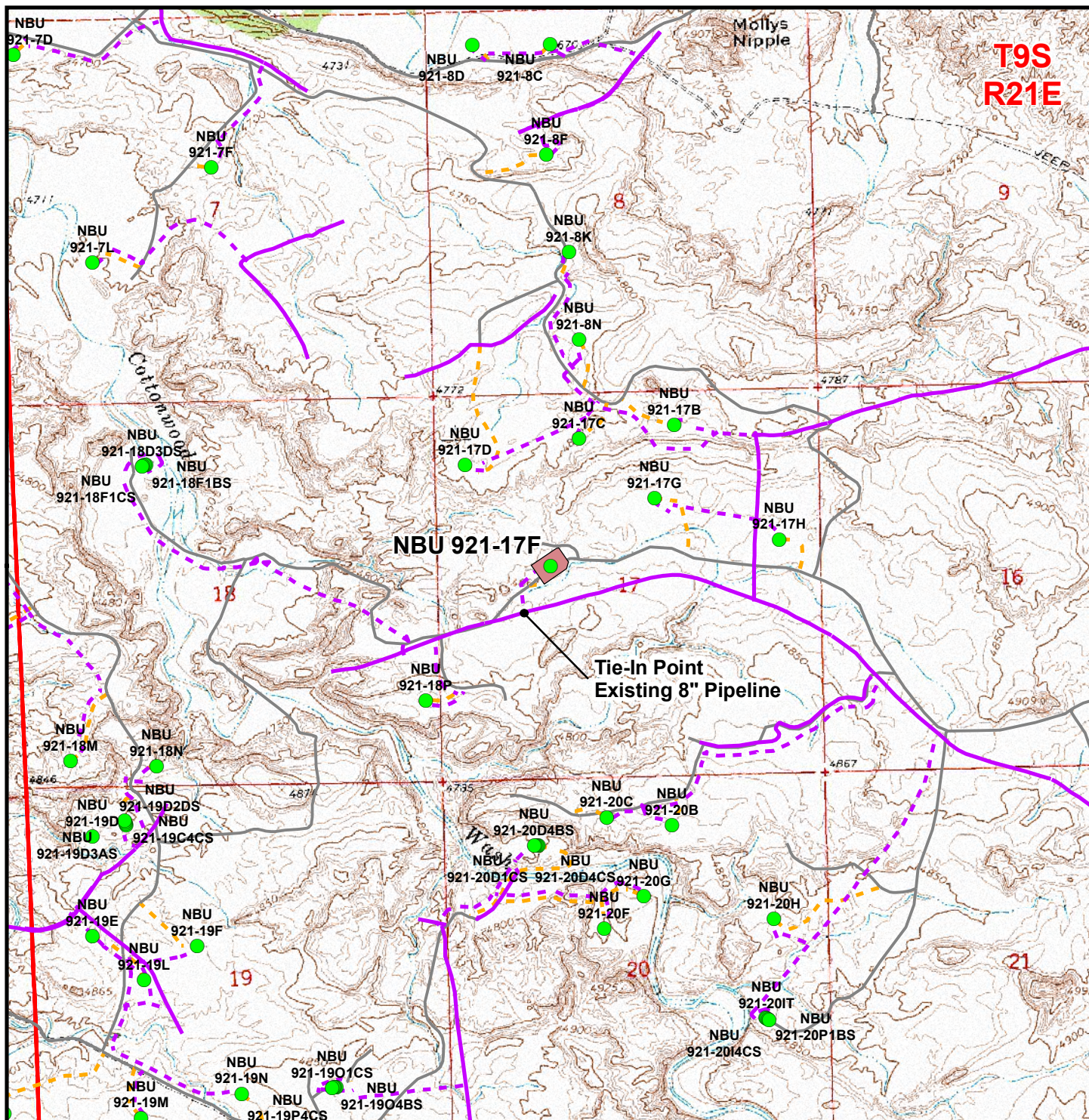
**S.L.B.&M., Uintah County, Utah**



Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: JELO	Date: 13 April 2009	<b>7</b>
Revised: TL	Date: 6 Oct 2009	

7 of 9





## Legend

- Well - Proposed
- Well Pad
- - - Pipeline - Proposed
- - - Road - Proposed
- Pipeline - Existing
- Road - Existing

Proposed Pipeline Length From Tie-In Point To Edge Of Pad:  $\pm 645$ ft  
Proposed Pipeline Length Around Pad:  $\pm 660$ ft

Kerr-McGee Oil & Gas Onshore, LP  
1099 18th Street, Denver, Colorado 80202

Well Pad - NBU 921-17F

NBU 921-17F

Topo D

2406' FNL, 1570' FWL

SE $\frac{1}{4}$  NW $\frac{1}{4}$ , Section 17, T9S, R21E

S.L.B.&M., Uintah County, Utah



Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No:
Drawn: JELO	Date: 13 April 2009	<b>8</b>
Revised: TL	Date: 6 Oct 2009	

8 of 9



**Kerr-McGee Oil & Gas Onshore, LP**  
**WELL PAD - NBU 921-17F**  
**WELL – NBU 921-17F**  
**Section 17, T9S, R21E, S.L.B.&M.**

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 13.9 MILES TO THE JUNCTION OF STATE HIGHWAY 88. EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION ALONG STATE HIGHWAY 88 APPROXIMATELY 16.8 MILES TO OURAY, UTAH. FROM OURAY, PROCEED IN A SOUTHERLY DIRECTION ALONG THE SEEP RIDGE ROAD (COUNTY B ROAD 2810) APPROXIMATELY 11.2 MILES TO THE INTERSECTION OF THE GLEN BENCH ROAD (COUNTY B ROAD 3260). EXIT LEFT AND PROCEED IN AN EASTERLY, THEN SOUTHEASTERLY, THEN NORTHEASTERLY DIRECTION ALONG THE GLEN BENCH ROAD APPROXIMATELY 11.4 MILES TO A CLASS D COUNTY ROAD TO THE SOUTHWEST. EXIT LEFT AND PROCEED IN A SOUTHWESTERLY DIRECTION ALONG THE CLASS D COUNTY ROAD APPROXIMATELY 1.8 MILES TO A SECOND CLASS D COUNTY ROAD TO THE NORTH. EXIT RIGHT AND PROCEED IN A NORTH BY NORTHWEST DIRECTION ALONG THE SECOND CLASS D COUNTY ROAD APPROXIMATELY 0.3 MILES TO A THIRD CLASS D COUNTY ROAD TO THE NORTH. EXIT RIGHT AND PROCEED IN A NORTHERLY, THEN NORTHEASTERLY, THEN NORTHERLY DIRECTION ALONG THE THIRD CLASS D COUNTY ROAD APPROXIMATELY 2.0 MILES TO A SERVICE ROAD TO THE SOUTHWEST. EXIT LEFT AND PROCEED IN A SOUTHWESTERLY, THEN NORTHWESTERLY, THEN WESTERLY DIRECTION ALONG THE SERVICE ROAD APPROXIMATELY 2.4 MILES TO THE PROPOSED WELL LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 59.8 MILES IN A SOUTHERLY DIRECTION.

**NBU 921-17F**

Surface: 2,406' FNL 1,570' FWL (SE/4NW/4)  
Sec. 17 T9S R21E

Uintah, Utah  
Mineral Lease: UTU 0575  
Surface Owner: Ute Indian Tribe  
Operator: Kerr-McGee Oil & Gas Onshore LP

**ONSHORE ORDER NO. 1**

***MULTI-POINT SURFACE USE & OPERATIONS PLAN  
SUBMITTED WITH SITE-SPECIFIC INFORMATION***

This Application for Permit to Drill (APD) is filed under the Notice of Staking (NOS) process as stated in Onshore Order No. 1 (OSO #1) and supporting Bureau of Land Management (BLM) and Bureau of Indian Affairs (BIA) documents. An NOS was submitted showing the surface location in SE/4 NW/4 of Section 17 T9S R21E.

This Surface Use Plan of Operations (SUPO) or 13-point plan provides the site-specific information for the above-referenced wells. This information is to be incorporated by reference into the Master Development Plan (MDP) for Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee). The MDP is available upon request from the BIA-Ft Duchesne Office.

An on-site meeting was held on September 1, 2009. Present were:

- Verlyn Pindell, Dave Gordon – BLM;
- Bucky Secakuku – BIA
- Bradley Pinnecoose – Ute Indian Tribe
- Scott Carson – Smiling Lake Consulting, Inc.
- Kolby Kay, Mitch Batty – 609 Consulting, LLC
- Nick Hall – Grasslands Consulting, Inc.
- Hal Blanchard, Charles Chase, Tony Kazeck and Raleen White – Kerr-McGee.

**1. Existing Roads:**

- A) Refer to Topo Map A for directions to the location.
- B) Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

**2. Planned Access Roads:**

*See MDP for additional details on road construction.*

Approximately  $\pm 200'$  ( $\pm 0.04$  miles) of new access road is proposed. Please refer to the attached Topo Map B. No pipelines will be crossed with the new construction.



*Existence of pipelines; maximum grade; turnouts; major cut and fills, culverts, or bridges; gates, cattle guards, fence cuts, or modifications to existing facilities were determined at the on-site and are typically shown on the attached Exhibits and Topo maps.*

3. **Location of Existing Wells Within a 1-Mile Radius:**

Please refer to Topo Map C.

4. **Location of Existing and Proposed Facilities:**

*See MDP for additional details on Existing and Proposed Facilities.*

*The following guidelines will apply if the well is productive.*

Approximately  $\pm 1,305'$  ( $\pm 0.25$  miles) of pipeline is proposed. Please refer to Topo D for the existing pipeline. Appropriate surface use agreements have been or will be obtained from the Ute Indian Tribe. Pipeline segments will be welded or zaplocked together on disturbed areas in or near the location, whenever possible, and dragged into place

At the onsite, Kerr-McGee agreed to the following:

- Re-route access road to be on the out-skirts of the well pad
- Arch monitor
- Round corners #A and #I to reduce fill on the south side of both backflow pit and reserve pit

5. **Location and Type of Water Supply:**

*See MDP for additional details on Location and Type of Water Supply.*

Water for drilling purposes will be obtained from one of the following sources:

- Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, application number 53617.
- Price Water Pumping Inc. Green River and White River, various sources, Water Right Number 49-1659, application number: a35745.

No water well is to be drilled on this lease.

6. **Source of Construction Materials:**

*See MDP for additional details on Source of Construction Materials.*

7. **Methods of Handling Waste Materials:**

*See MDP for additional details on Methods of Handling Waste Materials.*

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E  
NBU #159 in Sec. 35 T9S R21E  
Ace Oilfield in Sec. 2 T6S R20E  
MC&MC in Sec. 12 T6S R19E  
Pipeline Facility in Sec. 36 T9S R20E  
Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E  
Bonanza Evaporation Pond in Sec. 2 T10S R23E

**8. Ancillary Facilities:**

*See MDP for additional details on Ancillary Facilities.*

None are anticipated.

**9. Well Site Layout:** (See Location Layout Diagram)

*See MDP for additional details on Well Site Layout.*

All pits will be fenced according to the following minimum standards:

- Net wire (39-inch) will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.
- Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
- Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.
- All wire shall be stretched, by using a stretching device, before it is attached to corner posts.

**10. Plans for Reclamation of the Surface:**

*See MDP for additional details on Plans for Reclamation of the Surface.*

Kerr-McGee shall call the BIA for the seed mixture prior to starting interim and/or final reclamation actions.

**11. Surface/Mineral Ownership:**

The well pad and access road are located on lands owned by:

Ute Indian Tribe  
PO Box 70  
Fort Duchesne, Utah 84026  
435-722-5141

The mineral ownership is listed below:

United States of America  
Bureau of Land Management  
170 South 500 East  
Vernal, UT 84078  
435-781-4400

**12. Other Information:**

*See MDP for additional details on Other Information.*

**13. Lessee's or Operators' Representative & Certification:**

Kathy Schneebeck Dulnoan  
Staff Regulatory Analyst  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6007

Tommy Thompson  
General Manager, Drilling  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6724


Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

  
Kathy Schneebeck Dulnoan

December 10, 2009  
Date

CLASS I REVIEW OF KERR-MCGEE OIL & GAS  
ONSHORE LP'S 20 PROPOSED WELL LOCATIONS  
(T9S, R21E, SEC. 8, 10, 11, 12, 17, 18, 19, AND 20)  
IN UINTAH COUNTY, UTAH

By:

Patricia Stavish

Prepared For:

Ute Tribal Land  
Uintah and Ouray Agency

Prepared Under Contract With:

Kerr-McGee Oil & Gas Onshore LP  
1368 South 1200 East  
Vernal, Utah 84078

Prepared By:

Montgomery Archaeological Consultants, Inc.  
P.O. Box 219  
Moab, Utah 84532

MOAC Report No. 09-39b

October 9, 2009

United States Department of Interior (FLPMA)  
Permit No. 09-UT-60122

Ute Tribal Permit No. A09-363

**IPC #09-166**

# **Paleontological Reconnaissance Survey Report**

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**Survey of Kerr McGee's Proposed Onsite Changes to  
"NBU #921-8K, 17D, 17F, 18M, 19L & 20C"  
(Sec. 8, 17-20, T 9 S, R 20 E)**

**Ouray SE  
Topographic Quadrangle  
Uintah County, Utah**

December 8, 2009

Prepared by Stephen D. Sandau  
Paleontologist for  
Intermountain Paleo-Consulting  
P. O. Box 1125  
Vernal, Utah 84078



# Grasslands Consulting, Inc.

4800 Happy Canyon Road, Suite 110, Denver, CO 80237

(303) 759-5377 Office (303) 759-5324 Fax

## **SPECIAL STATUS PLANT AND WILDLIFE SPECIES REPORT**

**Report #:** GCI #61

**Operator:** Kerr-McGee Oil & Gas Onshore LP

**Wells:** NBU 921-17B, NBU 921-17C, NBU921-17D, NBU 921-17F, NBU921-17G, NBU921-17H

**Pipelines:** Associated pipelines to proposed well pads

**Access Roads:** Associated access roads to proposed well pads

**Location:** Section 17, Township 9 South, Range 21 East; Uintah County, Utah

**Survey-Species:** Uinta Basin Hookless Cactus (*Sclerocactus wetlandicus*) and nesting raptors

**Date:** 06/24/2009

**Observer(s):** Grasslands Consulting, Inc. Biologists: Dan Hamilton, Jay Slocum, Matt Kelahan, and Jonathan Sexauer. Technician: Chad Johnson

**Weather:** Partly cloudy, 75-90°F, 0-15 mph winds with no precipitation.

# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office

P.O. Box 45155

Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:  
3160  
(UT-922)

December 11, 2009

Memorandum

To: Assistant District Manager Minerals, Vernal District  
From: Michael Coulthard, Petroleum Engineer  
Subject: 2009 Plan of Development Natural Buttes Unit  
Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2009 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
43-047-50848	NBU 921-2502AS	Sec 25 T09S R21E 0954 FSL 1051 FEL BHL Sec 25 T09S R21E 1262 FSL 1985 FEL
43-047-50849	NBU 921-25P2AS	Sec 25 T09S R21E 0934 FSL 1049 FEL BHL Sec 25 T09S R21E 1231 FSL 0665 FEL
43-047-50850	NBU 921-25P2CS	Sec 25 T09S R21E 0894 FSL 1044 FEL BHL Sec 25 T09S R21E 0684 FSL 1170 FEL
43-047-50851	NBU 921-25P2DS	Sec 25 T09S R21E 0914 FSL 1046 FEL BHL Sec 25 T09S R21E 0851 FSL 0665 FEL
43-047-50853	NBU 921-17F	Sec 17 T09S R21E 2406 FNL 1570 FWL

This office has no objection to permitting the wells at this time.

/s/ Michael L. Coulthard

bcc: File - Natural Buttes Unit  
Division of Oil Gas and Mining  
Central Files  
Agr. Sec. Chron  
Fluid Chron

MCoulthard:mc:12-11-09



**Units**

**STATUS**

- ACTIVE
- EXPLORATORY
- GAS STORAGE
- NP PP OIL
- NP SECONDARY
- PI OIL
- PP GAS
- PP GEOTHERMAL
- PP OIL
- SECONDARY
- TERMINATED

**Fields**

**STATUS**

- Unknown
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- STORAGE
- TERMINATED

**Sections**

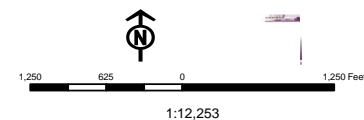
**Township**

**Wells Query**

<all other values>

**Status**

- APD - Approved Permit
- DRL - Spudded (Drilling Commenced)
- GS - Gas Injection
- GS - Gas Storage
- LA - Location Abandoned
- LOC - New Location
- OPS - Operation Suspended
- PA - Plugged Abandonment
- PGW - Producing Gas Well
- POW - Producing Oil Well
- RET - Returned APD
- SGW - Shut-In Gas Well
- SGOW - Shut-In Oil Well
- TA - Temp. Abandonment
- TW - Test Well
- WDW - Water Disposal
- WW - Water Injection Well
- WSW - Water Supply Well



# WORKSHEET

## APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 12/10/2009

**API NO. ASSIGNED:** 43047508530000

**WELL NAME:** NBU 921-17F

**OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)

**PHONE NUMBER:** 720 929-6156

**CONTACT:** Danielle Piernot

**PROPOSED LOCATION:** SENW 17 090S 210E

**Permit Tech Review:** ☒

**SURFACE:** 2406 FNL 1570 FWL

**Engineering Review:** ☒

**BOTTOM:** 2406 FNL 1570 FWL

**Geology Review:** ☒

**COUNTY:** UINTAH

**LATITUDE:** 40.03670

**LONGITUDE:** -109.57874

**UTM SURF EASTINGS:** 621259.00

**NORTHINGS:** 4432588.00

**FIELD NAME:** NATURAL BUTTES

**LEASE TYPE:** 1 - Federal

**LEASE NUMBER:** UTU 0575

**PROPOSED PRODUCING FORMATION(S):** WASATCH-MESA VERDE

**SURFACE OWNER:** 2 - Indian

**COALBED METHANE:** NO

### RECEIVED AND/OR REVIEWED:

☒ **PLAT**

☒ **Bond:** FEDERAL - WYB000291

☐ **Potash**

☒ **Oil Shale 190-5**

☐ **Oil Shale 190-3**

☐ **Oil Shale 190-13**

☒ **Water Permit:** Permit #43-8496

☐ **RDCC Review:**

☐ **Fee Surface Agreement**

☒ **Intent to Commingle**

**Commingle Approved**

### LOCATION AND SITING:

☐ **R649-2-3.**

**Unit:** NATURAL BUTTES

☐ **R649-3-2. General**

☐ **R649-3-3. Exception**

☒ **Drilling Unit**

**Board Cause No:** Cause 173-14

**Effective Date:** 12/2/1999

**Siting:** 460' fr u bdry & uncomm. tract

☐ **R649-3-11. Directional Drill**

**Comments:** Presite Completed

**Stipulations:**  
3 - Commingle - ddoucet  
4 - Federal Approval - dmason  
17 - Oil Shale 190-5(b) - dmason



GARY R. HERBERT  
*Governor*

GREGORY S. BELL  
*Lieutenant Governor*

## State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

### Permit To Drill

\*\*\*\*\*

**Well Name:** NBU 921-17F  
**API Well Number:** 43047508530000  
**Lease Number:** UTU 0575  
**Surface Owner:** INDIAN  
**Approval Date:** 12/28/2009

**Issued to:**

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

**Authority:**

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

**Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

**Commingling:**

In accordance with Board Cause No. 173-14, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

**General:**

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

**Conditions of Approval:**

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

**Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well – contact Carol Daniels at 801-538-5284

(please leave a voicemail message if not available)

OR

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <https://oilgas.ogm.utah.gov>

**Reporting Requirements:**

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) – due within 5 days of spudding the well
- Monthly Status Report (Form 9) – due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) – due prior to implementation
- Written Notice of Emergency Changes (Form 9) – due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) – due prior to implementation
- Report of Water Encountered (Form 7) – due within 30 days after completion
- Well Completion Report (Form 8) – due within 30 days after completion or plugging

**Approved By:**

A handwritten signature in black ink, appearing to read 'Gil Hunt', written over a horizontal line.

For Gil Hunt  
Associate Director, Oil & Gas



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0575
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> Ute Tr
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 921-17F
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2406 FNL 1570 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SENW Section: 17 Township: 09.0S Range: 21.0E Meridian: S		<b>9. API NUMBER:</b> 43047508530000
<b>PHONE NUMBER:</b> 720 929-6007 Ext		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 12/29/2010  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> APD EXTENSION OTHER: <span style="border: 1px solid black; display: inline-block; width: 100px; height: 15px;"></span>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  
 Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

Approved by the  
Utah Division of  
Oil, Gas and Mining

Date: 12/30/2010

By:

<b>NAME (PLEASE PRINT)</b> Danielle Piernot	<b>PHONE NUMBER</b> 720 929-6156	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A		<b>DATE</b> 12/29/2010



## The Utah Division of Oil, Gas, and Mining

- State of Utah  
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

### Request for Permit Extension Validation Well Number 43047508530000

**API:** 43047508530000

**Well Name:** NBU 921-17F

**Location:** 2406 FNL 1570 FWL QTR SENW SEC 17 TWNP 090S RNG 210E MER S

**Company Permit Issued to:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date Original Permit Issued:** 12/28/2009

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? ☐ Yes ☒ No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? ☐ Yes ☒ No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? ☐ Yes ☒ No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? ☐ Yes ☒ No
- Has the approved source of water for drilling changed? ☐ Yes ☒ No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? ☐ Yes ☒ No
- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

**Approved by the  
Utah Division of  
Oil, Gas and Mining**

**Signature:** Danielle Piernot

**Date:** 12/29/2010

**Title:** Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE,

**Date:** 12/30/2010

**By:** 

**RECEIVED** December 29, 2010

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED

DEC 18 2009  
mc

BLM

FORM APPROVED  
OMB No. 1004-0136  
Expires July 31, 2010

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. UTU0575
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator KERRMCGEE OIL&GAS ONSHORE LP Contact: DANIELLE E PIERNOT Email: Danielle.Piernot@anadarko.com		7. If Unit or CA Agreement, Name and No. 891008900A
3a. Address PO BOX 173779 DENVER, CO 80202-3779		8. Lease Name and Well No. NBU 921-17F
3b. Phone No. (include area code) Ph: 720-929-6156 Fx: 720-929-7156		9. API Well No. 43 041 50853
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SENW 2406FNL 1570FWL 40.03678 N Lat, 109.57945 W Lon At proposed prod. zone SENW 2406FNL 1570FWL 40.03678 N Lat, 109.57945 W Lon		10. Field and Pool, or Exploratory NATURAL BUTTES
14. Distance in miles and direction from nearest town or post office* APPROXIMATELY 29 MILES SOUTHEAST OF OURAY, UTAH		11. Sec., T., R., M., or Blk. and Survey or Area Sec 17 T9S R21E Mer SLB
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1570 FEET	16. No. of Acres in Lease 1600.00	12. County or Parish UINTAH
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. APPROXIMATELY 700 FEET	19. Proposed Depth 10600 MD 10600 TVD	13. State UT
21. Elevations (Show whether DF, KB, RT, GL, etc.) 4826 GL	22. Approximate date work will start 01/04/2010	17. Spacing Unit dedicated to this well
		20. BLM/BIA Bond No. on file WYB000291
		23. Estimated duration 60-90 DAYS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature (Electronic Submission)	Name (Printed/Typed) DANIELLE E PIERNOT Ph: 720-929-6156	Date 12/10/2009
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Title  
REGULATORY ANALYST I

Approved by (Signature) 	Name (Printed/Typed) Jerry Kenczka	Date NOV 07 2011
Title Assistant Field Manager Lands & Mineral Resources	Office VERNAL FIELD OFFICE	

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

CONDITIONS OF APPROVAL ATTACHED

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Additional Operator Remarks (see next page)

Electronic Submission #78729 verified by the BLM Well Information System  
For KERRMCGEE OIL&GAS ONSHORE LP, sent to the Vernal  
Committed to AFMSS for processing by GAIL JENKINS on 12/11/2009 ()

NOTICE OF APPROVAL

UDOGM

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

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NOV 18 2011

DIV. OF OIL, GAS & MINING



UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
VERNAL FIELD OFFICE

170 South 500 East

VERNAL, UT 84078

(435) 781-4400



**CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL**

Company: Kerr McGee Oil & Gas Onshore  
Well No: NBU 921-217F  
API No: 43-047-50853

Location: SENW, Sec. 17, T9S, R21E  
Lease No: UTU-0575  
Agreement: Natural Buttes Unit

**OFFICE NUMBER: (435) 781-4400**

**OFFICE FAX NUMBER: (435) 781-3420**

**A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR  
FIELD REPRESENTATIVE TO INSURE COMPLIANCE**

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

**NOTIFICATION REQUIREMENTS**

Construction Activity (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	- The Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist shall be notified at least 48 hours in advance of any construction activity. The Ute Tribal office is open Monday through Thursday.
Construction Completion (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	- Upon completion of the pertinent APD/ROW construction, notify the Ute Tribe Energy & Minerals Dept. for a Tribal Technician to verify the Affidavit of Completion. Notify the BLM Environmental Scientist prior to moving on the drilling rig.
Spud Notice (Notify BLM Petroleum Engineer)	- Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify BLM Supv. Petroleum Tech.)	- Twenty-Four (24) hours prior to running casing and cementing all casing strings to: <a href="mailto:BLM_UT_VN_OpReport@blm.gov">BLM_UT_VN_OpReport@blm.gov</a> .
BOP & Related Equipment Tests (Notify BLM Supv. Petroleum Tech.)	- Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify BLM Petroleum Engineer)	- Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.



**SURFACE USE PROGRAM  
CONDITIONS OF APPROVAL (COAs)**

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO<sub>x</sub> per horsepower-hour.
- Paint facilities "Shadow Gray."
- Monitor location by a permitted archaeologist during the construction process.
- Monitor location by a permitted paleontologist during the construction process.
- Round corner "A" on south side of the reserve pit an corner "I" on south side of backflow pit to reduce overlap with fill area.
- In accordance with the guidelines specified in the Utah BLM Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances, 2002 a raptor survey shall be conducted prior to construction of the proposed location, pipeline, or access road if construction will take place during raptor nesting season (January 1 through September 30). If active raptor nests are identified during a new survey, KMG shall conduct its operations according to the seasonal restrictions detailed I the Uinta Basin-specific RMP guidelines and spatial offsets specified by the USFWS Utah Raptor Guidelines (See Appendix D). The USFWS and BLM recommended a ¼-mile avoidance buffer surrounding active burrowing owl nests between March 1 and August 31.
- If project construction operations are not initiated before June 24, 2010, KMB shall conduct additional biological surveys in accordance with the guidelines specified in the USFWS Rare Plant Conservation Measures for Uinta Basin hookless Cactus (See Appendix D) and conduct its operations according to its specifications.

**BIA Standard Conditions of Approval:**

- Soil erosion will be mitigated by reseeding all disturbed areas.
- The gathering pipelines will be constructed to lie on the surface. The surface pipelines will not be bladed or cleared of vegetation. Where pipelines are constructed parallel to roads they may be welded on the road and then lifted from the road onto the right-of-way. Where pipelines do not parallel roads but cross-country between sites, they shall be welded in place at well sites or on access roads and then pulled between stations with a suitable piece of equipment. Traffic will be restricted along these areas so that the pipeline right-of-way will not be used as an access road.
- An open drilling system shall be used, unless otherwise specified in 10.0 Additional Stipulations of this document and in the Application for Permit to Drill. A closed drilling system shall be used in all flood plain areas, and other highly sensitive areas, recommended by the Ute Tribe Technician, BIA, and other agencies involved.

- The reserve pit shall be lined with a synthetic leak proof liner. After the drilling operation is complete, excess fluids shall be removed from the reserve pit and either hauled to an approved disposal site or shall be used to drill other wells. When the fluids are removed the pit shall be backfilled a minimum of 3.0' below the soil surface elevation.
- A closed production system shall be used. This means all produced water and oil field fluid wastes shall be contained in leak proof tanks. These fluids shall be disposed of in either approved injection wells or disposal pits.
- Major low water crossings will be armored with pit run material to protect them from erosion.
- All personnel shall refrain from collecting any paleontological fossils and from disturbing any fossil resources in the area.
- If fossils are exposed or identified during construction, all construction must cease and immediate notification to the Energy and Minerals Department and the Cultural Rights Protection Officer.
- Before the site is abandoned the company will be required to restore the right-of-way to near its original state. The disturbed area will be reseeded with desirable perennial vegetation. If necessary, the Bureau of Indian Affairs or Bureau of Land Management will provide a suitable seed mixture.
- Noxious weeds will be controlled on all surface disturbances within the project area. If noxious weeds spread from the project area onto adjoining land, the company will also be responsible for their control.
- If project construction operations are scheduled to occur after December 31, 2009, KMG shall conduct annual raptor surveys in accordance with the guidelines specified in the Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances, 2002. If active raptor nests are identified during a new survey, KMG shall conduct its operations according to the seasonal restrictions detailed in the Uinta basin-specific RMP guidelines and spatial offsets specified by the USFWS Utah Raptor Guidelines (See Appendix D).
- USFWS threatened and endangered plant and animal conservation measures will be followed, as appropriate to the species identified by the biological resource survey (See Appendix D).
- All personnel shall refrain from collecting artifacts and from disturbing any significant cultural resources in the area.
- If artifacts or any culturally sensitive materials are exposed or identified during construction, all construction must cease and immediate notification to the Energy and Minerals Department and the Cultural Rights Protection Officer.

**DOWNHOLE PROGRAM  
CONDITIONS OF APPROVAL (COAs)**

**SITE SPECIFIC DOWNHOLE COAs:**

A Gamma Ray Log shall be run from TD to surface.

**Variances Granted:**

Air Drilling:

- Properly lubricated and maintained rotating head, variance granted to use a properly maintained and lubricated diverter bowl in place of a rotating head.
- Blooie line discharge 100' from the well bore, variance granted for blooie line discharge to be 45' from the well bore.
- Compressors located in the opposite direction from the blooie line a minimum of 100' from the well bore. Variance granted for two truck/trailer mounted air compressors located within 40 feet from the well bore and 60' from the blooie line.
- In lieu of mud products on location, Kerr McGee will fill the reserve pit with water for kill fluid.
- Automatic igniter. Variance granted for igniter due to there being no productive formations while drilling with air.
- FIT test. Variance granted due to well-known geology and problems that can occur with FIT test.

**All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to.** The following items are emphasized:

**DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS**

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be

performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.

- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- **Please submit an electronic copy of all other logs run on this well in LAS format to BLM\_UT\_VN\_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.**
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

## OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at [www.ONRR.gov](http://www.ONRR.gov).
- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
  - Operator name, address, and telephone number.
  - Well name and number.
  - Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - Unit agreement and/or participating area name and number, if applicable.
  - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if

performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>			
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0575			
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> UTE			
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES			
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 921-17F			
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2406 FNL 1570 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SENW Section: 17 Township: 09.0S Range: 21.0E Meridian: S		<b>9. API NUMBER:</b> 43047508530000			
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES			
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>				
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 12/28/2011  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION         </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER         </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input checked="" type="checkbox"/> <b>APD EXTENSION</b>          OTHER: <span style="border: 1px solid black; display: inline-block; width: 100px; height: 1.2em; vertical-align: middle;"></span> </td> </tr> </table>		<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> <b>APD EXTENSION</b> OTHER: <span style="border: 1px solid black; display: inline-block; width: 100px; height: 1.2em; vertical-align: middle;"></span>
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<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b>  Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.					
<b>NAME (PLEASE PRINT)</b> Danielle Piernot		<b>PHONE NUMBER</b> 720 929-6156			
<b>SIGNATURE</b> N/A		<b>TITLE</b> Regulatory Analyst			
<b>DATE</b> 12/21/2011		<b>APPROVED BY THE UTAH DIVISION OF OIL, GAS AND MINING</b>  <b>Date:</b> 01/03/2012 <b>By:</b>			



## The Utah Division of Oil, Gas, and Mining

- State of Utah  
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

### Request for Permit Extension Validation Well Number 43047508530000

**API:** 43047508530000

**Well Name:** NBU 921-17F

**Location:** 2406 FNL 1570 FWL QTR SENW SEC 17 TWNP 090S RNG 210E MER S

**Company Permit Issued to:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date Original Permit Issued:** 12/28/2009

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? ☐ Yes ☒ No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? ☐ Yes ☒ No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? ☐ Yes ☒ No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? ☐ Yes ☒ No
- Has the approved source of water for drilling changed? ☐ Yes ☒ No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? ☐ Yes ☒ No
- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

**Signature:** Danielle Piernot

**Date:** 12/21/2011

**Title:** Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

**RECEIVED** Dec. 21, 2011



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>			
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0575			
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> UTE			
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES			
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 921-17F			
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2406 FNL 1570 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SENW Section: 17 Township: 09.0S Range: 21.0E Meridian: S		<b>9. API NUMBER:</b> 43047508530000			
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES			
<b>TYPE OF SUBMISSION</b>  <input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 3/15/2012  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<b>TYPE OF ACTION</b>  <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ACIDIZE  <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input checked="" type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION         </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER         </td> <td style="width: 33%; vertical-align: top;"> <input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION          OTHER: <input style="width: 100px;" type="text"/> </td> </tr> </table>		<input type="checkbox"/> ACIDIZE <input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>
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<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b> The operator requests approval to deepen the well to the Blackhawk formation (part of the Mesaverde Group). The Operator also requests approval for closed loop drilling option, surface casing change and production casing change. All other aspects of the previously approved drilling plan will not change. Please see the attachment. Thank you.					
<b>Approved by the Utah Division of Oil, Gas and Mining</b>  <b>Date:</b> March 22, 2012 <b>By:</b> <u>Derek Quist</u>					
<b>NAME (PLEASE PRINT)</b> Jaime Scharnowske		<b>PHONE NUMBER</b> 720 929-6304			
<b>SIGNATURE</b> N/A		<b>TITLE</b> Regulatory Analyst			
<b>DATE</b> 3/15/2012					

**Kerr-McGee Oil & Gas Onshore. L.P.****NBU 921-17F**

Surface: 2406 FNL / 1570 FWL      SENW

Section 17 T9S R21E

Unitah County, Utah  
Mineral Lease: UTU-0575**ONSHORE ORDER NO. 1****DRILLING PROGRAM**

1. & 2. **Estimated Tops of Important Geologic Markers:**  
**Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:**

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,710'	
Birds Nest	1,996'	Water
Mahogany	2,558'	Water
Wasatch	5,163'	Gas
Mesaverde	8,196'	Gas
Sego	10,475'	Gas
Castlegate	10,585'	Gas
Blackhawk	10,947'	Gas
TVD	11,547'	
TD	11,547'	

3. **Pressure Control Equipment** (Schematic Attached)

Please refer to the attached Drilling Program

4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. **Evaluation Program:**

Please refer to the attached Drilling Program

7. **Abnormal Conditions:**

Maximum anticipated bottom hole pressure calculated at 11547' TVD, approximately equals  
7,621 psi (0.66 psi/ft = actual bottomhole gradient)

---

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 5,133 psi (bottom hole pressure  
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

---

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-  
(0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. **Anticipated Starting Dates:**

Drilling is planned to commence immediately upon approval of this application.

9. **Variances:**

Please refer to the attached Drilling Program.  
Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

**Background**

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

**Variance for BOPE Requirements**

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

**Variance for Mud Material Requirements**

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

**Variance for Special Drilling Operation (surface equipment placement) Requirements**

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

**Variance for FIT Requirements**

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

**Conclusion**

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

**10. Other Information:**

Please refer to the attached Drilling Program.

RECEIVED: Mar. 15, 2012

NBU 921-17F

Drilling Program  
6 of 7

## KERR-McGEE OIL & GAS ONSHORE LP

### DRILLING PROGRAM

**CASING PROGRAM**

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	COLLAPSE	LTC	DQX
CONDUCTOR	14"	0-40'							
						3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0 to 3,010	28.00	IJ-55	LTC	1.79	1.33	4.72	N/A
						10,690	8,650	279,000	367,000
PRODUCTION	4-1/2"	0 to 5,000	11.60	HCP-110	DQX	1.19	1.11		3.42
	4-1/2"	5,000 to 11,547'	11.60	HCP-110	LTC	1.19	1.11	4.58	

**Surface Casing:**

(Burst Assumptions: TD = 13.0 ppg)

0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**Production casing:**

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi)

0.66 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**CEMENT PROGRAM**

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1			+ 0.25 pps flocele				
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
			+ 2% CaCl + 0.25 pps flocele				
SURFACE		NOTE: If well will circulate water to surface, option 2 will be utilized					
Option 2	LEAD	2,510'	65/35 Poz + 6% Gel + 10 pps gilsonite	230	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,657'	Premium Lite II +0.25 pps	360	35%	12.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	6,890'	50/50 Poz/G + 10% salt + 2% gel	1,630	35%	14.30	1.31
			+ 0.1% R-3				

\*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

\*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

**FLOAT EQUIPMENT & CENTRALIZERS**

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well. 1 centralizer on the first 3 joints and one every third joint thereafter.

**ADDITIONAL INFORMATION**

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

**DRILLING ENGINEER:**

Nick Spence / Danny Showers / Chad Loesel

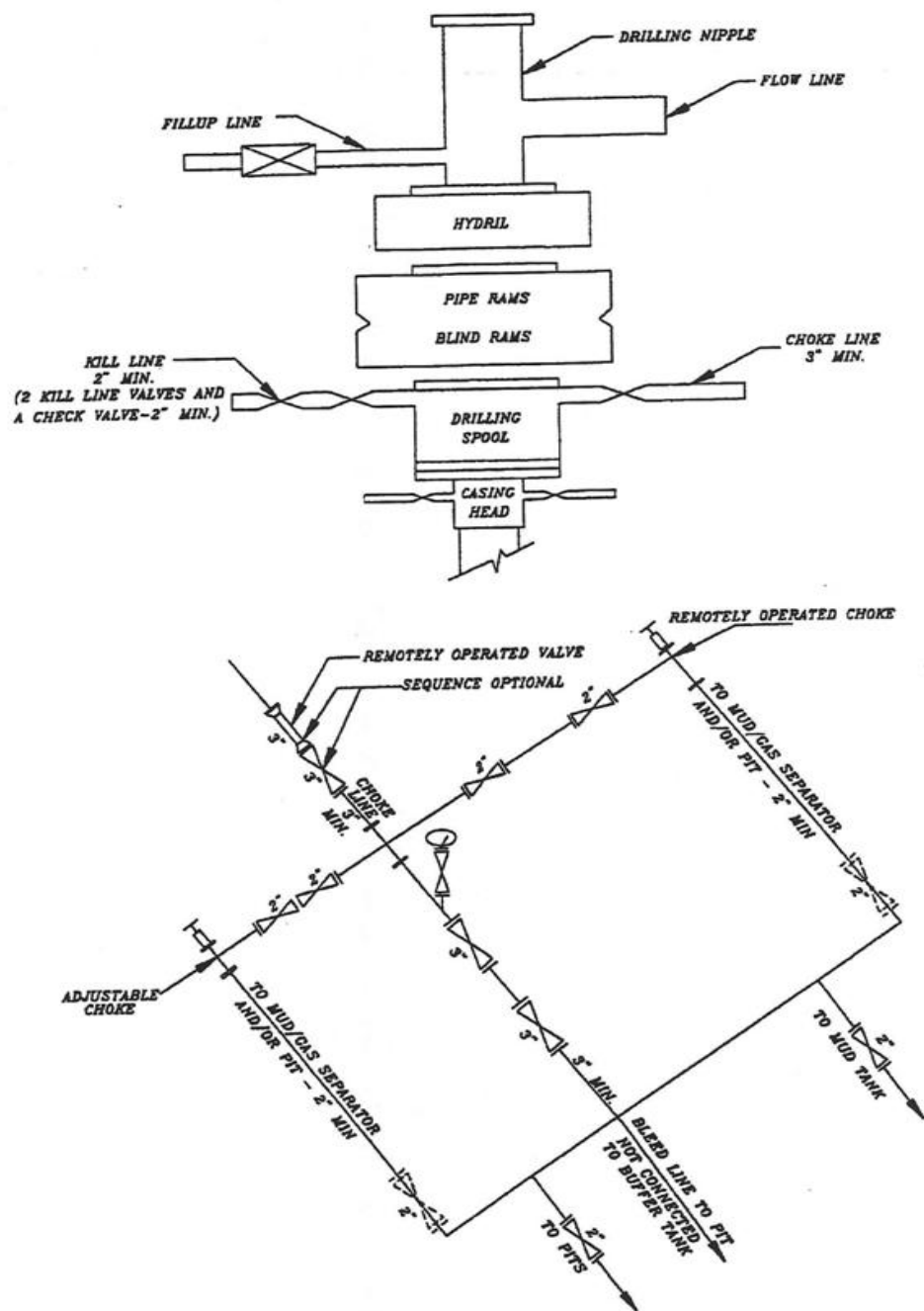
DATE:

**DRILLING SUPERINTENDENT:**

Kenny Gathings / Lovel Young

DATE:

RECEIVED: Mar. 15, 2012

**EXHIBIT A**  
**NBU 921-17F****SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK**



Requested Drilling Options:

Kerr-McGee will use either a closed loop drilling system that will require one pit and one cuttings storage area to be constructed on the drilling pad or a traditional drilling operation with one pit used for drilling and completion operations. The cuttings storage area will be used to contain only the de-watered drill cuttings and will be lined and bermed to prevent any liquid runoff. The drill cuttings will be buried in the completion pit once completion operations are completed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit will be lined with a synthetic material 20 mil or thicker and will be used for the completing of the wells on the pad or used as part of our Aandarko Completions Transportation System (ACTS). Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completions pit.

If Kerr-McGee does not use a closed loop drilling system, it will construct a traditional drilling/completions pit to contain drill cuttings and for use in completion operations. The pit will be lined with a synthetic material 20 mil or thicker. The drill cuttings will be buried in the pit using traditional pit closure standards.

## BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG  
Submitted By JAIME SCHARNOWSKE Phone Number 720.929.6304  
Well Name/Number NBU 921-17F  
Qtr/Qtr SEnw Section 17 Township 9S Range 21E  
Lease Serial Number UTU0575  
API Number 4304750853

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time 04/19/2012 11:00 HRS AM ☐ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☒ Surface Casing  
☐ Intermediate Casing  
☐ Production Casing  
☐ Liner  
☐ Other

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APR 19 2012

DIV. OF OIL, GAS & MINING

Date/Time 04/25/2012 08:00 HRS AM ☐ PM ☐

BOPE

- ☐ Initial BOPE test at surface casing point  
☐ BOPE test at intermediate casing point  
☐ 30 day BOPE test  
☐ Other

Date/Time \_\_\_\_\_ AM ☐ PM ☐

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT KENNY GATHINGS AT

435.828.0986 OR LOVEL YOUNG AT 435.781.7051

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0575
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<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 921-17F
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<b>PHONE NUMBER:</b> 720 929-6516		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UTAH		<b>STATE:</b> UTAH
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<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:  <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:  <input type="checkbox"/> SPUD REPORT Date of Spud:  <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 4/23/2012	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE   <input type="checkbox"/> CHANGE TO PREVIOUS PLANS   <input type="checkbox"/> CHANGE WELL STATUS   <input type="checkbox"/> DEEPEN   <input type="checkbox"/> OPERATOR CHANGE   <input type="checkbox"/> PRODUCTION START OR RESUME   <input type="checkbox"/> REPERFORATE CURRENT FORMATION   <input type="checkbox"/> TUBING REPAIR   <input type="checkbox"/> WATER SHUTOFF   <input type="checkbox"/> WILDCAT WELL DETERMINATION         </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING   <input type="checkbox"/> CHANGE TUBING   <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS   <input type="checkbox"/> FRACTURE TREAT   <input type="checkbox"/> PLUG AND ABANDON   <input type="checkbox"/> RECLAMATION OF WELL SITE   <input type="checkbox"/> SIDETRACK TO REPAIR WELL   <input type="checkbox"/> VENT OR FLARE   <input type="checkbox"/> SI TA STATUS EXTENSION   <input type="checkbox"/> OTHER         </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR   <input type="checkbox"/> CHANGE WELL NAME   <input type="checkbox"/> CONVERT WELL TYPE   <input type="checkbox"/> NEW CONSTRUCTION   <input type="checkbox"/> PLUG BACK   <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION   <input type="checkbox"/> TEMPORARY ABANDON   <input type="checkbox"/> WATER DISPOSAL   <input type="checkbox"/> APD EXTENSION           OTHER: <input style="width: 100%;" type="text"/> </div> </div>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU AIR RIG ON APRIL 21, 2012. DRILLED SURFACE HOLE TO 3120'. RAN SURFACE CASING AND CEMENTED. WELL IS WAITING ON ROTARY RIG. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH WELL COMPLETION REPORT.		
<b>NAME (PLEASE PRINT)</b> Gina Becker		<b>PHONE NUMBER</b> 720 929-6086
<b>SIGNATURE</b> N/A		<b>TITLE</b> Regulatory Analyst II
<b>DATE</b> 4/24/2012		<div style="text-align: right;"> <b>Accepted by the          Utah Division of          Oil, Gas and Mining</b>  <b>FOR RECORD ONLY</b>          April 27, 2012       </div>

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
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<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 4/19/2012	<input type="checkbox"/> CASING REPAIR	
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> CHANGE WELL NAME	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU TRIPLE A BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 CONDUCTOR PIPE. CMT W/28 SX READY MIX. SPUD WELL LOCATION ON APRIL 19, 2012 AT 1430 HRS.		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> May 02, 2012		
<b>NAME (PLEASE PRINT)</b> Gina Becker	<b>PHONE NUMBER</b> 720 929-6086	<b>TITLE</b> Regulatory Analyst II
<b>SIGNATURE</b> N/A	<b>DATE</b> 4/26/2012	

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 6

**ENTITY ACTION FORM**

Operator: KERR McGEE OIL & GAS ONSHORE LP Operator Account Number: N 2995  
Address: P.O. BOX 173779  
city DENVER  
state CO zip 80217 Phone Number: (720) 929-6247

**Well 1**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750853	NBU 921-17F		SENW	17	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	99999	2900	4/19/2012		4/30/2012		
<b>Comments:</b> MIRU BUCKET RIG. SPUD WELL ON 04/19/2012 AT 1430 HRS. <i>WSMVD</i>							

**Well 2**

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
<b>Comments:</b>							

**Well 3**

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
<b>Comments:</b>							

**ACTION CODES:**

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

JENN HAWKINS

Name (Please Print)

*Jenn Hawkins*

Signature

OPERATIONS SPECIALIST III 4/26/2012

Title

Date

**RECEIVED**  
**APR 27 2012**

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0575
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> UTE
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 921-17F
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2406 FNL 1570 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SENW Section: 17 Township: 09.0S Range: 21.0E Meridian: S		<b>9. API NUMBER:</b> 43047508530000
<b>PHONE NUMBER:</b> 720 929-6514		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UTAH		<b>STATE:</b> UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION  OTHER: <input style="width: 100px;" type="text"/>
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:			
<input type="checkbox"/> SPUD REPORT Date of Spud:			
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 7/6/2012			

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  
 No activity for the month of June 2012. Surface casing set at 2,856'.

Accepted by the  
 Utah Division of  
 Oil, Gas and Mining  
**FOR RECORD ONLY**  
 July 09, 2012

<b>NAME (PLEASE PRINT)</b> Jaime Scharnowske	<b>PHONE NUMBER</b> 720 929-6304	<b>TITLE</b> Regularatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 7/6/2012	

State of Utah - Notification Form

Operator Anadarko Petroleum Rig Name/# PIONEER 54  
Submitted By STUART NEILSON Phone Number 435-790-2921  
Well Name/Number NBU 921-17F  
Qtr/Qtr SE/4 NW/4 Section 17 Township 9S Range 21E  
Lease Serial Number UTU0575  
API Number 4304750853

Casing – Time casing run starts, not cementing times.

- ☐ Production Casing  
☐ Other

Date/Time \_ \_ AM ☐ PM ☐

BOPE

- ☒ Initial BOPE test at surface casing point  
☐ Other

Date/Time 7/18/12 20:00 AM ☐ PM ☒

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JUL 18 2012

Rig Move

Location To:

DIV. OF OIL, GAS & MINING

Date/Time \_\_\_\_\_ AM ☐ PM ☐

Remarks \_\_\_\_\_

State of Utah - Notification Form

Operator Anadarko Petroleum Rig Name/# PIONEER 54  
Submitted By STUART NEILSON Phone Number 435-790-2921  
Well Name/Number NBU 921-17F  
Qtr/Qtr SE/4 NW/4 Section 17 Township 9S Range 21E  
Lease Serial Number UTU0575  
API Number 4304750853

Casing – Time casing run starts, not cementing times.

☒ Production Casing  
☐ Other

Date/Time 7/26/12 6 AM ☒ PM ☐

BOPE

☐ Initial BOPE test at surface casing point  
☐ Other

Date/Time \_ \_ AM ☐ PM ☐

Rig Move

Location To:

Date/Time \_ \_ AM ☐ PM ☐

Remarks NEXT WELL - NBU 921-20H

RECEIVED

JUL 25 2012

DIV. OF OIL, GAS & MINING



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0575
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> UTE
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 921-17F
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2406 FNL 1570 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SENW Section: 17 Township: 09.0S Range: 21.0E Meridian: S		<b>9. API NUMBER:</b> 43047508530000
<b>PHONE NUMBER:</b> 720 929-6514		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 8/2/2012	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
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	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. No activity for the month of July 2012. Well TD at 11,540'.		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> August 06, 2012		
<b>NAME (PLEASE PRINT)</b> Cara Mahler	<b>PHONE NUMBER</b> 720 929-6029	<b>TITLE</b> Regulatory Analyst I
<b>SIGNATURE</b> N/A	<b>DATE</b> 8/2/2012	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
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<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> UTE
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 921-17F
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2406 FNL 1570 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SENW Section: 17 Township: 09.0S Range: 21.0E Meridian: S		<b>9. API NUMBER:</b> 43047508530000
<b>PHONE NUMBER:</b> 720 929-6514		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION	<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <div style="border: 1px solid black; padding: 2px; display: inline-block;">8/1/2012</div>  <input type="checkbox"/> SPUD REPORT Date of Spud:
<input type="checkbox"/> DRILLING REPORT Report Date:	<input checked="" type="checkbox"/> OTHER			

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

MIRU ROTARY RIG. FINISHED DRILLING FROM 3120' TO 11540' ON 7/24/2012. RAN 4-1/2" 11.6# I-80 PRODUCTION CASING. CEMENTED PRODUCTION CASING. RELEASED PIONEER 54 RIG ON 8/1/2012. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES. THE PIT ON THIS LOCATION WILL BE REFURBISHED AND UTILIZED AS PART OF THE ACTS SYSTEM.

**Accepted by the  
Utah Division of  
Oil, Gas and Mining**

**FOR RECORD ONLY**

August 07, 2012

<b>NAME (PLEASE PRINT)</b> Cara Mahler	<b>PHONE NUMBER</b> 720 929-6029	<b>TITLE</b> Regulatory Analyst I
<b>SIGNATURE</b> N/A	<b>DATE</b> 8/6/2012	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU 0575
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> UTE
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 921-17F
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2406 FNL 1570 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SENW Section: 17 Township: 09.0S Range: 21.0E Meridian: S		<b>9. API NUMBER:</b> 43047508530000
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>TYPE OF SUBMISSION</b>  <input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:  <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:  <input type="checkbox"/> SPUD REPORT Date of Spud:  <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 9/19/2012	<b>TYPE OF ACTION</b>  <div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE   <input type="checkbox"/> CHANGE TO PREVIOUS PLANS   <input type="checkbox"/> CHANGE WELL STATUS   <input type="checkbox"/> DEEPEN   <input type="checkbox"/> OPERATOR CHANGE   <input checked="" type="checkbox"/> PRODUCTION START OR RESUME   <input type="checkbox"/> REPERFORATE CURRENT FORMATION   <input type="checkbox"/> TUBING REPAIR   <input type="checkbox"/> WATER SHUTOFF   <input type="checkbox"/> WILDCAT WELL DETERMINATION         </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING   <input type="checkbox"/> CHANGE TUBING   <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS   <input type="checkbox"/> FRACTURE TREAT   <input type="checkbox"/> PLUG AND ABANDON   <input type="checkbox"/> RECLAMATION OF WELL SITE   <input type="checkbox"/> SIDETRACK TO REPAIR WELL   <input type="checkbox"/> VENT OR FLARE   <input type="checkbox"/> SI TA STATUS EXTENSION   <input type="checkbox"/> OTHER         </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR   <input type="checkbox"/> CHANGE WELL NAME   <input type="checkbox"/> CONVERT WELL TYPE   <input type="checkbox"/> NEW CONSTRUCTION   <input type="checkbox"/> PLUG BACK   <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION   <input type="checkbox"/> TEMPORARY ABANDON   <input type="checkbox"/> WATER DISPOSAL   <input type="checkbox"/> APD EXTENSION           OTHER: <input style="width: 100%;" type="text"/> </div> </div>	
<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b> THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 09/19/2012. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> September 28, 2012		
<b>NAME (PLEASE PRINT)</b> Lindsey Frazier		<b>PHONE NUMBER</b> 720 929-6857
<b>SIGNATURE</b> N/A		<b>TITLE</b> Regulatory Analyst II
<b>DATE</b> 9/24/2012		

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

5. Lease Serial No.  
UTU0575

1a. Type of Well ☐ Oil Well ☒ Gas Well ☐ Dry ☐ Other  
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.  
Other \_\_\_\_\_

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.  
UTU63047A

2. Name of Operator  
KERR MCGEE OIL & GAS ONSHORE  
Contact: JAIME L. SCHARNOWSKE  
Email: JAIME.SCHARNOWSKE@ANADARKO.COM

8. Lease Name and Well No.  
NBU 921-17F

3. Address  
PO BOX 173779  
DENVER, CO 80217

3a. Phone No. (include area code)  
Ph: 720-929-6304

9. API Well No.  
43-047-50853

4. Location of Well (Report location clearly and in accordance with Federal requirements)\*

At surface SENW 2406FNL 1570FWL 40.036783 N Lat, 109.579452 W Lon

At top prod interval reported below SENW 2406FNL 1570FWL 40.036783 N Lat, 109.579452 W Lon

At total depth SENW 2406FNL 1570FWL 40.036783 N Lat, 109.579452 W Lon *BHL by HSM*

10. Field and Pool, or Exploratory  
NATURAL BUTTES

11. Sec., T., R., M., or Block and Survey  
or Area Sec 17 T9S R21E Mer SLB

12. County or Parish  
UINTAH

13. State  
UT

14. Date Spudded  
04/19/2012

15. Date T.D. Reached  
07/24/2012

16. Date Completed  
☐ D & A ☒ Ready to Prod.  
09/19/2012

17. Elevations (DF, KB, RT, GL)\*  
4824 GL

18. Total Depth: MD 11540  
TVD 11536

19. Plug Back T.D.: MD 11463  
TVD 11459

20. Depth Bridge Plug Set: MD  
TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)  
CBL/GR/CCL/TEMP-BHP-HDIL/ZDL/CNGR

22. Was well cored? ☒ No ☐ Yes (Submit analysis)  
Was DST run? ☒ No ☐ Yes (Submit analysis)  
Directional Survey? ☒ No ☐ Yes (Submit analysis)

**23. Casing and Liner Record (Report all strings set in well)**

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
20.000	14.000 STL	36.7	0	40		28			
11.000	8.625 IJ-55	28.0	0	3105		590		0	
7.875	4.500 I-80	11.6	0	11510		2238		2440	

**24. Tubing Record**

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.375	11114							

**25. Producing Intervals**

**26. Perforation Record**

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) MESAVERDE	9288	11343	9288 TO 11343	0.360	120	OPEN
B)						
C)						
D)						

**27. Acid, Fracture, Treatment, Cement Squeeze, Etc.**

Depth Interval	Amount and Type of Material
9288 TO 11343	PUMP 9,980 BBLs SLICK H2O & 26,766 LBS 30/50 OTTAWA SAND; 217,020 LBS 30/50 TLC SAND

**28. Production - Interval A**

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
09/19/2012	09/21/2012	24	→	0.0	3800.0	690.0			DIV. OF OIL, GAS & MINING FLOWS FROM WELL
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
20/64	SI	3421.0	→	0	3800	690		PGW	

**28a. Production - Interval B**

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
	SI		→						

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #154943 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

**\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\***



## 28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

## 28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

29. Disposition of Gas(Sold, used for fuel, vented, etc.)  
SOLD

## 30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

## 31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
				GREEN RIVER BIRD'S NEST MAHOGANY WASATCH MESAVERDE	1766 2014 2567 5202 8145

## 32. Additional remarks (include plugging procedure):

The first 210' of the surface hole was drilled with a 12 ?? bit. The remainder of surface hole was drilled with an 11? bit. DQX P-110 csg was run from surface to 5021'; LTC P-110 csg was run from 5021' to 11,510'. Attached is the chronological well history, perforation report & final survey.

## 33. Circle enclosed attachments:

- |   |                    |               |                       |
|---|--------------------|---------------|-----------------------|
| 1. Electrical/Mechanical Logs (1 full set req'd.)     | 2. Geologic Report | 3. DST Report | 4. Directional Survey |
| 5. Sundry Notice for plugging and cement verification | 6. Core Analysis   | 7. Other:     |                       |

## 34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

Electronic Submission #154943 Verified by the BLM Well Information System.  
For KERR MCGEE OIL & GAS ONSHORE,L, sent to the Vernal

Name (please print) JAIME L. SCHARNOWSKETitle REGULATORY ANALYSTSignature (Electronic Submission)Date 10/16/2012

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**\*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\***

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-17F

Spud Date: 4/21/2012

Project: UTAH-UINTAH

Site: NBU 921-17F

Rig Name No: PROPETRO 12/12, PIONEER 54/54

Event: DRILLING

Start Date: 4/12/2012

End Date: 8/1/2012

Active Datum: RKB @4,843.00usft (above Mean Sea Level)

UWI: SE/NW/0/9/S/21/E/17/0/0/26/PM/N/2406/W/0/1570/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
4/21/2012	0:00 - 14:00	14.00	DRLSUR	01	A	P		MOVE RIG 5.2 MILES TO THE NBU 921-17F
	14:00 - 15:00	1.00	DRLSUR	02	C	P		PICK UP MUD MOTOR AND 12.25 BIT SPUD 4/21/12 14:00 DRILL 12.25" HOLE 44 ft TO 210 ft (166 FT, 166 FPH). 12.25 in. BIT ON 37 TH RUN. WOB 5-15 Kips. GPM 491. PSI ON/OFF 600/400. SURFACE RPM 55, MOTOR 83, TOTAL RPM 138. UP/DOWN/ ROT 20/20/20 K. DRAG 0 . CIRCULATE RESERVE PIT
	15:00 - 17:00	2.00	DRLSUR	06	A	P		DRILL DOWN TO 210 ft W/6 in COLLARS. PRE JOB SAFETY MEETING, LAY DOWN 6 in DRILL COLLARS, 12 1/4 in BIT. MAKE UP Q506F 11in BIT (3 RD RUN) (SN 7138966) PICK UP 8 in DIRECTIONAL ASSEMBLY. INSTALL EM TOOL. ORIENT TO MUD MOTOR AND TRIP IN HOLE
4/22/2012	17:00 - 0:00	7.00	DRLSUR	02	C	P		DRILL 11" HOLE F/ 220' - 1330' WOB 20-27 ROT 45-65 GPM 490 DHR 83 AVE ROP 105 FT HR UP/DN/ROT 80/53/67 LAST SURVEY 07 DEG 201.55 AZI AZI 3.5' BELOW 3' LEFT OF TARGET CIRCULATE RESERVE PIT
	0:00 - 20:00	20.00	DRLSUR	02	C	P		DRILL 11" HOLE F/ 1330' - 3120' T.D. WOB 20-27 ROT 45-65 GPM 490 DHR 83 AVE ROP 90 FT HR UP/DN/ROT 85/70/79 LAST SURVEY .88 DEG 196.89 AZI 3.5' BELOW 3' LEFT OF TARGET CIRCULATE RESERVE PIT
	20:00 - 22:00	2.00	DRLSUR	05	C	P		CIRCULATE AND CONDITION MUD PRIOR TO LDDS
4/23/2012	22:00 - 0:00	2.00	DRLSUR	06	A	P		TRIP OUT OF HOLE LAYING DOWN DRILL STRING TO RUN CASING
	0:00 - 2:00	2.00	DRLSUR	06	A	P		TOOH LAYING DOWN BREAK DOWN MWD TOOLS. DIRECTIONAL NON MAGS BIT AND MUD MOTOR
	2:00 - 7:00	5.00	DRLSUR	12	C	P		RIG UP AND RUN 70 JOINTS 8.625 28# J55 SURFACE CASING SHOE AT 3088' BAFFLE AT 3044'

**US ROCKIES REGION**  
**Operation Summary Report**

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Spud Date: 4/21/2012

Project: UTAH-UINTAH

Site: NBU 921-17F

Rig Name No: PROPETRO 12/12, PIONEER 54/54

Event: DRILLING

Start Date: 4/12/2012

End Date: 8/1/2012

Active Datum: RKB @4,843.00usft (above Mean Sea Level)

UWI: SE/NW/0/9/S/21/E/17/0/0/26/PM/N/2406/W/0/1570/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:00 - 11:00	4.00	DRLSUR	12	E	P		PRE JOB SAFETY MEETING PRESSURE TEST LINES TO 3000 PSI PUPM 190 BBLS H2O TO 20 BBLS GEL WATER INTO 230 SKS (156.4 BBLS) LEAD CMNT 11 PPG 3.82 YIELD CMNT INTO 175 SKS ( 35.8 BBLS) 15.8 PPG 1.15 YIELD TAIL CMNT 15 BBLS LEAD CMNT TO SURFACE PUMP 100 SKS (20.4 BBLS) TAIL CMNT DOWN 1" CMNT STARTED TO FALL WILL CALL TOP OUT TRUCK TO FINISH JOB RELEASED RIG @ 1100
7/17/2012	18:00 - 0:00	6.00	RDMO	01	E	P		RIG DOWN FLOOR, TOP DRIVE & SERVICE LOOP
7/18/2012	0:00 - 6:00	6.00	RDMO	01	E	P		RIG DOWN FLOW LINE, FLARE LINES & BACKYARD
	6:00 - 18:00	12.00	RDMO	01	A	P		MOVE RIG 5 MILES TO THE NBU 921-17F, WITH WESTROC TRUCKING, 7 BED , 3 HAUL TRUCK, 2 FORKLIFTS, 1 PUSHER & 2 SWAMPERS, J&C CRANE, 1 OPERATER & 4 OILERS, PTI ON CAMPS-2 HAUL TRUCKS & 2/ 1-TONS WITH 4 HANDS, 5 EXTRA RIG HANDS, TRUCKS RELEASED @ 16:30, CRANE @ 17:00, RAISE DERRICK @ 16:00
	18:00 - 20:30	2.50	MIRU	01	B	P		RIG UP RIG, BACKYARD, TOP DRIVE & FLOOR, FLOW LINE, GAS BUSTER, FLARE LINES
	20:30 - 21:30	1.00	DRLPRV	14	A	P		NIPPLE UP BOPE
	21:30 - 22:30	1.00	DRLPRV	14	A	P		NIPPLE UP SWACO
	22:30 - 0:00	1.50	DRLPRV	15	A	P		HELD SAFETY MEETING W/ RIG CREW & TESTER, TEST PIPE RAMS & BLIND RAM 250 LOW FOR 5 MIN, 5000 HIGH FOR 10 MIN
7/19/2012	0:00 - 1:30	1.50	DRLPRV	15	A	P		TEST BOPE, INSIDE, OUT SIDE VALVES, CHECK VALVE, IBOP, SUPER CHOKE, 250 PSI FOR 5 MIN, 5000 PSI FOR 10 MIN, ANN 250 PSI FOR 5 MIN, 2500 PSI FOR 10 MIN
	1:30 - 3:00	1.50	DRLPRV	15	A	P		TEST SWACO 250 PSI LOW FOR 5 MIN, 1000 PSI HIGH FOR 10 MIN, ( HAD 2 LEAKS )
	3:00 - 3:30	0.50	DRLPRV	15	A	P		TEST SURFACE CASING TO 1500 PSI FOR 30 MIN
	3:30 - 4:00	0.50	DRLPRV	14	B	P		INSTALL WEAR BUSHING
	4:00 - 9:30	5.50	DRLPRV	06	A	P		HELD SAFETY MEETING WITH RIG & KIMZEY PICKUP CREWS, RIG UP & PICKUP BHA & SCRIBE, 30 HWDP, & DRILL PIPE TO TOP OF CEMENT @ 3028', RIG DOWN PICKUP TRUCK
	9:30 - 10:00	0.50	DRLPRV	09	A	P		CUT DRILL LINE
	10:00 - 10:30	0.50	DRLPRV	23		P		PRE-SPUD INSPECTION
	10:30 - 12:30	2.00	DRLPRV	02	F	P		TAG & DRILL CEMENT FROM 3028, F/E & OPEN HOLE TO 3135, FLOAT @ 3069', SHOE @ 3113'

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-17F

Spud Date: 4/21/2012

Project: UTAH-UINTAH

Site: NBU 921-17F

Rig Name No: PROPETRO 12/12, PIONEER 54/54

Event: DRILLING

Start Date: 4/12/2012

End Date: 8/1/2012

Active Datum: RKB @4,843.00usft (above Mean Sea Level)

UWI: SE/NW0/9/S/21/E/17/0/0/26/PM/N/2406/W/0/1570/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	12:30 - 15:00	2.50	DRLPRV	02	B	P		CLOSED LOOP SYSTEM DRILL F/ 3135 TO 3520', 385' @ 154' PH WOB / 18-20 RPM TOP DRIVE 50-60 SPM 200 GPM 586 MW 8.5 PPG 26 VIS TRQ ON/OFF = 3-6 K PSI ON /OFF 1700-1300, DIFF 200-500 PU/SO/RT = 105-95-100 K LOST 0 BBLS TO FORMATION SLIDE = 15' IN .17 HRS = 150' PH ROT = 370' IN 2.33 HRS = 158.8' PH NOV/ 2- DEWATERING 15.25 S & 12.14W OF TARGET CENTER SWACO OFF LINE 0 DRILL FLARE, 0 CONN FLARE SERVICE RIG, F/T CROWM-O-MATIC
	15:00 - 15:30	0.50	DRLPRV	07	A	P		
	15:30 - 0:00	8.50	DRLPRV	02	B	P		CLOSED LOOP SYSTEM DRILL F/ 3520' TO 4790', 1270' @ 149.4' PH BOP DRILL 69 SEC, F/T HCR & ANN WOB / 20-22 RPM TOP DRIVE 50-60 SPM 200 GPM 586 MW 8.5 PPG 26 VIS TRQ ON/OFF = 4-7 K PSI ON /OFF 1300-1700, DIFF 200-500 PU/SO/RT = 105-95-100 K LOST 0 BBLS TO FORMATION SLIDE = 30' IN .5 HRS = 60' PH ROT = 1240' IN 8 HRS = 155' PH NOV/ 2- DEWATERING 13.5' S & 11' W OF TARGET CENTER SWACO OFF LINE 0 DRILL FLARE, 0 CONN FLARE ANN PSI - DRILLING 20, CONN 0
7/20/2012	0:00 - 9:00	9.00	DRLPRV	02	B	P		CLOSED LOOP SYSTEM DRILL F/ 4790' TO 6270', 1480' @ 164.4' PH WOB / 20-22 RPM TOP DRIVE 50-60 SPM 200 GPM 586 MW 8.5 PPG 26 VIS TRQ ON/OFF = 4-7 K PSI ON /OFF 1800-1500, DIFF 200-500 PU/SO/RT = 160-140-150 K LOST 0 BBLS TO FORMATION SLIDE = 63' IN .84 HRS = 75' PH ROT = 1417' IN 8.17 HRS = 173.4' PH NOV/ 2- DE WATERING 15' N & 18' W OF TARGET CENTER SWACO OFF LINE 0 DRILL FLARE, 0 CONN FLARE ANN PSI - DRILLING 20, CONN 0

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-17F

Spud Date: 4/21/2012

Project: UTAH-UINTAH

Site: NBU 921-17F

Rig Name No: PROPETRO 12/12, PIONEER 54/54

Event: DRILLING

Start Date: 4/12/2012

End Date: 8/1/2012

Active Datum: RKB @4,843.00usft (above Mean Sea Level)

UWI: SE/NW/0/9/S/21/E/17/0/0/26/PM/N/2406/W/0/1570/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	9:00 - 16:00	7.00	DRLPRV	02	B	P		<p>CLOSED LOOP SYSTEM</p> <p>DRILL F/ 6270' TO 7124', 854' @ 122' PH</p> <p>LOST 150 BBLS TO FORMATION @ 6400' SEEPING</p> <p>10 GAL A MIN, PUMPING LCM SWEEPS, TOTAL</p> <p>LOST 250 BBLS</p> <p>WOB / 20-22</p> <p>RPM TOP DRIVE 50-60</p> <p>SPM 200 GPM 586</p> <p>MW 8.5 PPG 26 VIS</p> <p>TRQ ON/OFF = 4-7 K</p> <p>PSI ON /OFF 1800-1500, DIFF 200-500</p> <p>PU/SO/RT = 170-150-160 K</p> <p>LOST 300 BBLS TO FORMATION</p> <p>SLIDE = 27' IN .5 HRS = 54' PH</p> <p>ROT = 827' IN 6.5 HRS = 127.2' PH</p> <p>NOV/ 2- DE WATERING</p> <p>32' N &amp; 26' W OF TARGET CENTER</p> <p>SWACO OFF LINE</p> <p>0 DRILL FLARE, 0 CONN FLARE</p> <p>ANN PSI - DRILLING 20, CONN 0</p> <p>SERVICE RIG,</p>
	16:00 - 16:30	0.50	DRLPRV	07	A	P		
	16:30 - 0:00	7.50	DRLPRV	02	B	P		<p>CLOSED LOOP SYSTEM</p> <p>DRILL F/ 7124' TO 7805', 681' @ 90.8' PH</p> <p>SEEPING 5 GAL A MIN, PUMPING LCM SWEEPS,</p> <p>WOB / 20-22</p> <p>RPM TOP DRIVE 50-60</p> <p>SPM 200 GPM 586</p> <p>MW 8.6 PPG 26 VIS</p> <p>TRQ ON/OFF = 5-8 K</p> <p>PSI ON /OFF 1900-1600, DIFF 200-500</p> <p>PU/SO/RT = 200-180-19 K</p> <p>LOST 55 BBLS TO FORMATION</p> <p>SLIDE = 35' IN .67 HRS = 52.2' PH</p> <p>ROT = 656' IN 6.83 HRS = 96' PH</p> <p>NOV/ 2- DE WATERING</p> <p>57' N &amp; 28' W OF TARGET CENTER</p> <p>SWACO OFF LINE</p> <p>0 DRILL FLARE, 0 CONN FLARE</p> <p>ANN PSI - DRILLING 20, CONN 0</p>
7/21/2012	0:00 - 4:30	4.50	DRLPRV	02	B	P		<p>CLOSED LOOP SYSTEM</p> <p>DRILL F/ 7805' TO 8225', 420' @ 93.3' PH</p> <p>WOB / 20-22</p> <p>RPM TOP DRIVE 50-60</p> <p>SPM 200 GPM 586</p> <p>MW 8.6 PPG 26 VIS</p> <p>TRQ ON/OFF = 5-8 K</p> <p>PSI ON /OFF 1900-1600, DIFF 200-500</p> <p>PU/SO/RT = 190-170-180 K</p> <p>LOST 0 BBLS TO FORMATION</p> <p>SLIDE = 0</p> <p>ROT = 100%</p> <p>NOV/ 2- DE WATERING</p> <p>67N &amp; 29 W OF TARGET CENTER</p> <p>SWACO OFF LINE</p> <p>0 DRILL FLARE, 0 CONN FLARE</p> <p>ANN PSI - DRILLING 20, CONN 0</p>



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UWI: SE/NW0/9/S/21/E/17/0/0/26/PM/N/2406/W/0/1570/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	4:30 - 6:00	1.50	DRLPRV	08	B	Z		CLEAN RUBBER & ROCKS OUT OF SUCTION LINES
	6:00 - 14:30	8.50	DRLPRV	02	B	P		CLOSED LOOP SYSTEM DRILL F/ 8225' TO 9210', 985' @ 115.8' PH WOB / 20-22 RPM TOP DRIVE 50-60 SPM 200 GPM 586 MW 8.4 PPG 28 VIS TRQ ON/OFF = 5-8 K PSI ON /OFF 2200-1700, DIFF 200-500 PU/SO/RT = 200-180-190 K LOST 0 BBLS TO FORMATION SLIDE = 0 ROT = 100% NOV/ 2- DE WATERING 63' N & 30.5' W OF TARGET CENTER SWACO ON LINE @ 8600' - 09:30 10 DRILL FLARE, 20 CONN FLARE ANN PSI - DRILLING 140-250, CONN 400
	14:30 - 15:00	0.50	DRLPRV	07	A	P		SERVICE RIG
	15:00 - 19:30	4.50	DRLPRV					CLOSED LOOP SYSTEM DRILL F/ 9210' TO 9591', 381' @ 84.6' PH WOB / 20-22 RPM TOP DRIVE 50-60 SPM 200 GPM 586 MW 8.4 PPG 28 VIS TRQ ON/OFF = 5-8 K PSI ON /OFF 2200-1700, DIFF 200-500 PU/SO/RT = 200-180-190 K LOST 0 BBLS TO FORMATION SLIDE = 0 ROT = 100% NOV/ 2- DE WATERING 51' N & 26' W OF TARGET CENTER SWACO ON LINE @ 8600' - 09:30 10 DRILL FLARE, 20 CONN FLARE ANN PSI - DRILLING 140-250, CONN 400
	19:30 - 20:30	1.00	DRLPRV	08	B	Z		WORK ON PIMPS
	20:30 - 0:00	3.50	DRLPRV	02	B	P		CLOSED LOOP SYSTEM DRILL F/ 9581 TO 9875', 294' @ 84' PH WOB / 20-22 RPM TOP DRIVE 50-60 SPM 200 GPM 586 MW 8.4 PPG 28 VIS TRQ ON/OFF = 6-8 K PSI ON /OFF 2300-1800, DIFF 200-500 PU/SO/RT = 210-190-200 K LOST 0 BBLS TO FORMATION SLIDE = 0 ROT = 100% NOV/ 2- DE WATERING 24.3 N & 18.5 W OF TARGET CENTER SWACO ON LINE @ 8600' - 09:30 10 DRILL FLARE, 20 CONN FLARE ANN PSI - DRILLING 140-250, CONN 400

**US ROCKIES REGION**  
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Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
7/22/2012	0:00 - 6:30	6.50	DRLPRV	02	B	P		CLOSED LOOP SYSTEM DRILL F/ 9875' TO 10,300', 425' @ 65.9' PH WOB / 22-24 RPM TOP DRIVE 50-60 SPM 200 GPM 586 MW 8.6 PPG 28 VIS TRQ ON/OFF = 7-9 K PSI ON /OFF 2300-1900, DIFF 200-500 PU/SO/RT = 230-190-210 K LOST 0 BBLS TO FORMATION SLIDE = 0 ROT = 100% NOV/ 2- DE WATERING 21' N & 18' W OF TARGET CENTER SWACO ON LINE @ 8600' - 09:30 10 DRILL FLARE, 20 CONN FLARE ANN PSI - DRILLING 140-250, CONN 400 CHANGE SWAB IN #1 PUMP
	6:30 - 7:00	0.50	DRLPRV	08	A	Z		CLOSED LOOP SYSTEM DRILL F/ 10,300 TO 10,728', 428' @ 47.5' PH WOB / 22-24 RPM TOP DRIVE 50-60 SPM 200 GPM 586 MW 8.6 PPG 28 VIS TRQ ON/OFF = 7-9 K PSI ON /OFF 2300-1900, DIFF 200-500 PU/SO/RT = 235-200-215 K LOST 50 BBLS TO FORMATION SLIDE = 0 ROT = 100% NOV/ 2- DE WATERING 3' N & 14' W OF TARGET CENTER SWACO ON LINE @ 8600' - 09:30 10 DRILL FLARE, 20 CONN FLARE ANN PSI - DRILLING 140-250, CONN 400
	7:00 - 16:00	9.00	DRLPRV	02	B	P		SERVICE RIG
	16:00 - 16:30	0.50	DRLPRV	07	A	P		CLOSED LOOP SYSTEM DRILL F/10,728 TO 10,763', 35' @ 17.5' PH WOB / 22-24 RPM TOP DRIVE 50-60 SPM 200 GPM 586 MW 8.6 PPG 32 VIS TRQ ON/OFF = 7-9 K PSI ON /OFF 2300-1900, DIFF 200-500 PU/SO/RT = 235-200-215 K LOST 0 BBLS TO FORMATION SLIDE = 0 ROT = 100% NOV/ 2- DE WATERING 2' S & 12' W OF TARGET CENTER SWACO ON LINE @ 8600' - 09:30 10 DRILL FLARE, 20 CONN FLARE ANN PSI - DRILLING 140-250, CONN 400
	16:30 - 18:30	2.00	DRLPRV					CIRC & COND HOLE FOR TRIP, PUMP HIGH VIS SWEEPS, BUILD 12.5 PILL & SPOT ON BOTTOM
	18:30 - 22:00	3.50	DRLPRV	05	F	P		

**US ROCKIES REGION**  
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Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	22:00 - 0:00	2.00	DRLPRV	22	A	X		CIRC OUT 5 STANDS, PUMP & SPOT 12.5# PILL ON BOTTOM, STUCK, WORK STUCK PIPE MOVING UP BUT SLOW
7/23/2012	0:00 - 2:00	2.00	DRLPRV	22	A	X		WORK STUCK PIPE FREE @ 10,000
	2:00 - 6:30	4.50	DRLPRV	05	G	X		DISPLACE WELL WITH 11.4 PPG MUD & CIRC OUT GAS & CUTTINGS
	6:30 - 13:30	7.00	DRLPRV	06	A	X		BACK REAM FROM 10,000 TO 9,000', TRIP OUT, WORK THOUGH TIGHT HOLE @ 6,500, 5800, 5000, 4900, 4700, LAYDOWN BIT & MOTOR
	13:30 - 17:00	3.50	DRLPRV	06	A	P		PICKUP BIT #2 & MOTOR, TRIP IN HOLE TO SHOE, BREAK CIRC, WORK THOUGH BRIDGE'S ALL THE WAY IN TO 5250'
	17:00 - 17:30	0.50	DRLPRV	07	A	P		SERVICE RIG
	17:30 - 22:00	4.50	DRLPRV	03	A	P		TRIP IN HOLE , WASH & REAM MOST ALL THE WAY FROM 5250 TO 8350', SAND & ROCK OVER SHAKER, MW 11, VIS 40
	22:00 - 22:30	0.50	DRLPRV	05	A	P		CIRC OUT GAS, 20-30' FLARE
	22:30 - 0:00	1.50	DRLPRV	03	A	P		REAM TIGHT HOLE FROM 8350 TO 8700, SAND & ROCKS OVER SHAKER, 10=29' FLARE, MW 11.2, VIS 45
7/24/2012	0:00 - 6:00	6.00	DRLPRV	03	A	P		WASH & REAM FROM 8700 TO 10,763', MW 11.3, VIS 45, 5-10' FLARE, LOTS OF SAND & ROCKS OVER SHAKER, 5% LCM
	6:00 - 17:00	11.00	DRLPRV	02	B	P		CLOSED LOOP SYSTEM DRILL F/ 10,763' TO 11,298', 535' @ 48.6' PH WOB / 22-24 RPM TOP DRIVE 50-60 SPM 180 GPM 498 MW 11.4 PPG 45 VIS TRQ ON/OFF = 7-9 K PSI ON /OFF 2500-2100, DIFF 200-500 PU/SO/RT = 240-175-205 K LOST 0 BBLS TO FORMATION SLIDE = 0 ROT = 100% NOV/ 1 CONVENTIONAL , 1 BYPASS 23' S & 8' W OF TARGET CENTER SWACO OFF LINE 5 DRILL FLARE, 10 CONN FLARE ANN PSI - DRILLING 10-20, CONN 10
	17:00 - 17:30	0.50	DRLPRV	07	A	P		SERVICE RIG, F/T ANN & HCR VALVE, BOP DRILL 90 SEC

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-17F				Spud Date: 4/21/2012				
Project: UTAH-UINTAH			Site: NBU 921-17F				Rig Name No: PROPETRO 12/12, PIONEER 54/54	
Event: DRILLING			Start Date: 4/12/2012				End Date: 8/1/2012	
Active Datum: RKB @4,843.00usft (above Mean Sea Level)			UWI: SE/NW/0/9/S/21/E/17/0/0/26/PM/N/2406/W/0/1570/0/0					
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	17:30 - 22:00	4.50	DRLPRV	02	B	P		CLOSED LOOP SYSTEM DRILL F/11,298 TO 11540', 242' @ 53.7' PH WOB / 22-24 RPM TOP DRIVE 50-60 SPM 180 GPM 498 MW 11.5 PPG 45 VIS TRQ ON/OFF = 7-9 K PSI ON /OFF 2500-2100, DIFF 200-500 PU/SO/RT = 240-175-205 K LOST 0 BBLS TO FORMATION SLIDE = 0 ROT = 100% NOV/ 1 CONVENTIONAL , 1 BYPASS 34.3 S & 4.7 W OF TARGET CENTER SWACO OFF LINE 0 DRILL FLARE, 5 CONN FLARE ANN PSI - DRILLING 10-20, CONN 10
	22:00 - 0:00	2.00	DRLPRV	05	C	P		CIRC & COND HOLE, PUMP HIGH VIS SWEEP, CIRC HOLE CLEAN OF CUTTINGS & GAS, MW 11.5+, VIS 46
7/25/2012	0:00 - 10:30	10.50	DRLPRV	06	E	P		SHORT TRIP TO SHOE, HAVING TO PUMP, WILL NOT PULL WITHOUT PUMP, RAISING MUD AS WE COME OUT OF HOLE, FROM 4700' TO 3100' PULLED FREE TRIP IN HOLE, WASH & REAM FROM 4600 TO 6750, MW 12, VIS 45
	10:30 - 20:00	9.50	DRLPRV	03	E	P		SEVICE RIG
	20:00 - 20:30	0.50	DRLPRV	07	A	P		
	20:30 - 0:00	3.50	DRLPRV	03	A	P		TRIP IN HOLE, WASH & REAM FROM 6750 TO 8770' MW 12, VIS 45
7/26/2012	0:00 - 5:30	5.50	DRLPRV	03	A	P		WASH & REAM FROM 8770 TO TD OF 11,540, MW 12.1, VIS 45, LCM 10%
	5:30 - 8:30	3.00	DRLPRV	05	C	P		CIRC & COND MUD, CLEAN HOLE & CIRC OUT GAS, RAISE MW TO 12.2+
	8:30 - 14:30	6.00	DRLPRV	06	E	P		PUMP OUT 20 STD SHORT TRIP, PUMP BACK TO BOTTOM, 100+ DRAG WITHOUT PUMP, 30-50 WITH PUMP & ROTATION, SAME GOING IN
	14:30 - 17:30	3.00	DRLPRV	05	C	P		CIRC & COND HOLE FOR TRIP, RAISE MW TO 12.3+ PPG, VIS 45, LCM 10%
	17:30 - 23:00	5.50	DRLPRV	06		P		PULL OUT OF HOLE FOR LOGS, STRAIGHT PULL OFF BOTTOM 50-100K OVER,
	23:00 - 0:00	1.00	DRLPRV	11	D	P		HELD SAFETY MEETING, RIG UP LOGGERS
7/27/2012	0:00 - 4:30	4.50	DRLPRV	11	D	P		LOG UP FROM 5367' (BRIDGE OUT), RIG DOWN LOGGERS
	4:30 - 6:00	1.50	DRLPRV	06	E	P		PICKUP BIT & BIT SUB, TRIP IN HOLE TO SHOE
	6:00 - 6:30	0.50	DRLPRV	09	A	P		CUT & SLIP DRILL LINE
	6:30 - 12:30	6.00	DRLPRV	06	E	P		TRIP IN HOLE, WASH & REAM TIGHT SPOTS @ 6600, 8600, 10,500 & 120' TO BOTTOM
	12:30 - 14:30	2.00	DRLPRV	05	C	P		CIRC & COND HOLE, 10' FLARE ON BOTTOM,S UP FOR 10 MIN'S
	14:30 - 21:30	7.00	DRLPRV	06	A	P		LAYDOWN DRILL STRING, TIGHT OFF BOTTOM 50-75 K OVERPULL
	21:30 - 22:00	0.50	DRLPRV	14	B	P		PULL WEAR BUSHING
	22:00 - 0:00	2.00	DRLPRV	12	C	P		HELD SAFETY MEETING WITH RIG & KIMZEY CASING CREWS, RIG UP & RUN 4.5" PROD CASING

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-17F

Spud Date: 4/21/2012

Project: UTAH-UINTAH

Site: NBU 921-17F

Rig Name No: PROPETRO 12/12, PIONEER 54/54

Event: DRILLING

Start Date: 4/12/2012

End Date: 8/1/2012

Active Datum: RKB @4,843.00usft (above Mean Sea Level)

UWI: SE/NW/0/9/S/21/E/17/0/0/26/PM/N/2406/W/0/1570/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
7/28/2012	0:00 - 5:30	5.50	DRLPRV	12	C	P		RUN 4.5" PROD CASING, WASH THOUGH TIGHT HOLE @ 6350, 7400, & 8750
	5:30 - 10:00	4.50	DRLPRV	12	C	X		SAFETY MEETING, TRY & WASH THOUGH TIGHT HOLE @ 8750', WILL NOT WASH
	10:00 - 17:30	7.50	DRLPRV	12	C	X		PULL & LAYDOWN CASING, RIG DOWN CASING CREW
	17:30 - 18:00	0.50	DRLPRV	07	A	P		SERVICE RIG
	18:00 - 19:00	1.00	DRLPRV	14	B	P		INSTALL WEAR BUSHING
	19:00 - 0:00	5.00	DRLPRV	06	F	P		SAFETY MEETING, PICKUP BIT, BIT SUB, 3-COLLARS, HWDP & D/P TO 6450' WASH TIGHT SPOT, RAISING MW TO 12.5 PPG
7/29/2012	0:00 - 2:30	2.50	DRLPRV	06	F	X		PICKUP PIPE TO CLEAN OUT TIGHT HOLE, WASH @ 6430, 6720, 6765, 8620,
	2:30 - 12:00	9.50	DRLPRV	03	A	X		@ 8620 WASH & REAM TIGHT HOLE TO 9100', HOLE STILL PACKING OFF, RAISE MW TO 12.9#, LOST RETURNS
	12:00 - 12:30	0.50	DRLPRV	06	E	X		PULL 6 STANDS
	12:30 - 13:30	1.00	DRLPRV	05	B	X		BUILD VOLUME & RAISE LCM TO 15%, MW 12.8, VIS 45
	13:30 - 14:00	0.50	DRLPRV	06	F	X		PULL 6 STANDS
	14:00 - 15:30	1.50	DRLPRV	05	A	X		REGAIN RETURNS, BUILD VOLUME & RAISE LCM TO 15%, MW 12.8, VIS 45
	15:30 - 16:30	1.00	DRLPRV	06	E	X		PULL OUT OF HOLE TO PICKUP THE REST OF THE DRILL PIPE UP
	16:30 - 18:30	2.00	DRLPRV	06	E	X		PICKUP 76 JTS DRILL PIPE, RIG DOWN PICKUP TRUCK
7/30/2012	18:30 - 0:00	5.50	DRLPRV	06	E	X		WASH & REAM FROM 8600 TO 8700', TRIP IN HOLE WASH TIGHT HOLE @ 8900, 9150, 9700', 10,200, 10,700, 11,100 & 400' TO BOTTOM
	0:00 - 0:30	0.50	DRLPRV	03	A	X		WASH LAST 100' TO BOTTOM
	0:30 - 3:30	3.00	DRLPRV	05	C	X		CIRC & COND HOLE, MAINTAIN 12.8+ MW, 45 VIS, 15% LCM, IN & OUT
	3:30 - 9:00	5.50	DRLPRV	06	F	X		TRIP OUT FOR NEW BIT, BACK REAM 1st - 5 STDs, PULL & BACK REAM, 11,000, 10,700, 10,600, 10,200, 9140, 8780, 8670, LAY DOWN BIT #3 (BUTTON BIT)
	9:00 - 10:30	1.50	DRLPRV	06	F	X		PICKUP BIT #4 (BUTTON BIT), TRIP IN HOLE TO SHOE
	10:30 - 11:30	1.00	DRLPRV	09	A	P		SLIP & CUT DRILL LINE
	11:30 - 15:30	4.00	DRLPRV	06	F	X		TRIP IN HOLE TO 8700' & START TO WASH & REAM WELL BORE
	15:30 - 16:00	0.50	DRLPRV	07	A	P		RAISE MW TO 13#
	16:00 - 20:00	4.00	DRLPRV	03	A	X		SERVICE RIG
	20:00 - 21:30	1.50	DRLPRV	06	F	X		WASH & REAM TO 9200' & STABIZE WELL BORE
7/31/2012	21:30 - 0:00	2.50	DRLPRV	06	F	X		TRIP OUT 10 STANDS, WAIT 30 MIN & TRIP BACK THOUGH TIGHT HOLE, TRIP WENT GOOD
	0:00 - 2:00	2.00	DRLPRV	03	D	X		TRIP IN HOLE WASH TIGHT HOLE @ 9650, 11,200
	2:00 - 4:30	2.50	DRLPRV	05	C	X		WASH & REAM 120' TO BOTTOM
	4:30 - 12:30	8.00	DRLPRV	06	D	X		CIRC AROUND #13+ MW
	12:30 - 13:00	0.50	DRLPRV	14	B	P		HELD SAFETY MEETING WITH RIG & KIMZEY PICKUP CREWS, RIG UP & LAY DOWN DRILL STRING & BHA PULL WEAR BUSHING



**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-17F

Spud Date: 4/21/2012

Project: UTAH-UINTAH

Site: NBU 921-17F

Rig Name No: PROPETRO 12/12, PIONEER 54/54

Event: DRILLING

Start Date: 4/12/2012

End Date: 8/1/2012

Active Datum: RKB @4,843.00usft (above Mean Sea Level)

UWI: SE/NW/0/9/S/21/E/17/0/0/26/PM/N/2406/W/0/1570/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
8/1/2012	13:00 - 22:30	9.50	DRLPRV	12	C	P		HELD SAFETY MEETING WITH RIG & CASING CREWS, RIG UP & RUN 147 JTS 4.5" P-110 LTC, 112 JTS 4.5" P110 DQX, 2 MARKER'S & 1 X/O, LAND CASING & RIG DOWN CASING CREW, SHOE @ 11,509, FLOAT @ 11,464
	22:30 - 0:00	1.50	DRLPRV	05	D	P		CIRC & COND HOLE BEFORE CEMENTING PROD CASING
	0:00 - 4:00	4.00	DRLPRV	12	E	P		HELD SAFETY MEETING WITH RIG & CEMENTER'S, RIG UP & TEST LINES TO 5500 PSI, PUMP 25 BBL SPACER, LEAD 748 SACKS 13 PPG 1.77 YLD, TAIL 1490 SACKS 14.3 PPG 1.32 YLD, DISPLACE WELL WITH 178 BBLS CLAYTREAT WATER, FLOATS HELD, FULL RETURNS THOUGH OUT JOB WITH 18 BBLS LEAD CEMENT TO CATCH TANK & 2 BBLS BACK TO TRUCK, BUMP PLUG WITH 4153 PSI ( 500 OVER FINAL LIFT OF 3495 ), FLUSH STACK & RIG DOWN
	4:00 - 4:30	0.50	DRLPRV	14	B	P		SET PACKOFF
	4:30 - 6:00	1.50	DRLPRV	14	A	P		NIPPLE DOWN SWACO
	6:00 - 8:00	2.00	DRLPRV	14	A	P		NIPPLE DOWN BOPE
	8:00 - 10:00	2.00	DRLPRV	01	E	P		CLEAN PITS & RELEASE RIG TO THE NBU 921-20H @ 10:00, 8/1/12

## 1 General

### 1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

### 1.2 Well/Wellbore Information

Well	NBU 921-17F	Wellbore No.	OH
Well Name	NBU 921-17F	Wellbore Name	NBU 921-17F
Report No.	1	Report Date	4/21/2012
Project	UTAH-UINTAH	Site	NBU 921-17F
Rig Name/No.		Event	COMPLETION
Start Date	9/11/2012	End Date	9/19/2012
Spud Date	4/21/2012	Active Datum	RKB @4,843.00usft (above Mean Sea Level)
UWI	SE/NW/0/9/S/21/E/17/0/0/26/PM/N2406/W/0/1570/0/0		

### 1.3 General

Contractor	CUTTERS WIRELINE	Job Method		Supervisor	STEVE WALL, SR.
Perforated Assembly		Conveyed Method			

### 1.4 Initial Conditions

Fluid Type		Fluid Density		Gross Interval	9,288.0 (usft)-11,343.0 (usft)	Start Date/Time	9/17/2012 12:00AM
Surface Press		Estimate Res Press		No. of Intervals	21	End Date/Time	9/18/2012 12:00AM
TVD Fluid Top		Fluid Head		Total Shots	120	Net Perforation Interval	40.00 (usft)
Hydrostatic Press		Press Difference		Avg Shot Density	3.00 (shot/ft)	Final Surface Pressure	
Balance Cond	NEUTRAL					Final Press Date	

### 1.5 Summary

## 2 Intervals

### 2.1 Perforated Interval

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
9/18/2012 12:00AM	MESAVERDE/			9,288.0	9,290.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

## 2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
9/18/2012 12:00AM	MESAVERDE/			9,297.0	9,299.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			9,310.0	9,314.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			9,793.0	9,797.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			9,893.0	9,897.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			11,024.0	11,025.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			11,041.0	11,043.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			11,061.0	11,062.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			11,076.0	11,077.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			11,096.0	11,097.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			11,105.0	11,107.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			11,127.0	11,128.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			11,136.0	11,137.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			11,150.0	11,151.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			11,192.0	11,194.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			11,202.0	11,203.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			11,223.0	11,225.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/17/2012 12:00AM	MESAVERDE/			11,304.0	11,306.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/17/2012 12:00AM	MESAVERDE/			11,319.0	11,321.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/17/2012 12:00AM	MESAVERDE/			11,329.0	11,331.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/17/2012 12:00AM	MESAVERDE/			11,341.0	11,343.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

## 3 Plots

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-17F

Spud Date: 4/21/2012

Project: UTAH-UINTAH

Site: NBU 921-17F

Rig Name No: SWABBCO 8/8

Event: COMPLETION

Start Date: 9/11/2012

End Date: 9/19/2012

Active Datum: RKB @4,843.00usft (above Mean Sea Level)

UWI: SE/NW/0/9/S/21/E/17/0/0/26/PM/N/2406/W/0/1570/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
4/21/2012	-							
9/11/2012	7:00 - 7:15	0.25	FRAC	48		P		HELD SAFETY MEETING HIGH PRESSURE
	7:15 - 10:00	2.75	FRAC	33	C	P		FILL SURFACE CSG. MIRU B&C QUICK TEST. PSI TEST T/ 1000 PSI. HELD FOR 15 MIN LOST 12 PSI. PSI TEST T/ 3500 PSI. HELD FOR 15 MIN LOST 28 PSI. 1ST PSI TEST T/ 9000 PSI. HELD FOR 30 MIN LOST 71 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. SWFN
9/12/2012	13:30 - 17:00	3.50	COMP	30	A	P		MIRU F/ NBU 921-17F, ND WH NU BOPS RU FLOOR & TBG EQUIP. TALLY & PU 37/8 BIT & 16 JTS 23/8 P-110, EOT @ 522' SW SDFN
9/13/2012	7:00 - 7:30	0.50	COMP	48		P		HSM, PICKING UP TBG OFF FLOAT.
	7:30 - 14:30	7.00	COMP	31	I	P		TALLY & PU 216 JTS TOTAL 232 IN 23/8 P-110, SLIP DIE FELL DWN HOLE TO FIRST COLLAR. 13:30, STRIP OFF BOPS & 11"X4" SPOOL NIPPLE INTO TOP OF HANGER WONT LET SLIP DIE COME OUT OF HOLE, NU SPOOL & BOPS, SWI ORDERED STRING MILL TO DRESS INSIDE OF HANGER NIPPLE. SDFN
9/14/2012	7:00 - 7:30	0.50	COMP	48		P		HSM, NIPPLING DOWN & NIPPLING UP BOPS.
	7:30 - 17:30	10.00	COMP	44	D	P		ND TBG HANGER SPOOL, NU BOPS ROTATE TBG TO MAKE SURE SLIP WASN'T BINDING UP OK, PU 4" TAPERED MILL & 10' PUP, 233 JTS IN HOLE. BROKE CIRC REV, 9:12 AM, DRESS OUT 4 1/2 HANGER NIPPLE TO CSG TOP 16:30. LIFT BOPS PULL TBG GOT SLIP DIE OUT OF WELL. L/D MILL & 2 JTS 23/8 231 JTS IN HOLE SWI. TEST 11"X 4" SPOOL TO 5,000 # W/ CAMERON OK. SDFWE
9/17/2012	7:00 - 7:30	0.50	COMP	48		P		HSM, TRIPPING TBG IN DERICK.
	7:30 - 11:30	4.00	COMP	31	I	P		PU 53 JTS 23/8 P-110 EOT @ 9018', POOH W/ 284 JTS L/D BIT. ND BOPS NU TBG SPOOL & FV.
	11:30 - 12:00	0.50	COMP	33	C	P		RU B&C TEST CSG & FV TO 9,000# AS OF PRECEDURE. LOST 88 PSI GOOD TEST, RD B&C.
	12:00 - 16:00	4.00	COMP	37	B	P		RU CUTTERS, RIH & PERF 1ST STG AS OF PROCEDURE, SWI PREP TO FRAC IN AM SDFN.
9/18/2012	7:00 - 7:30	0.50	COMP	48		P		HSM, STAYING AWAY FROM HIGH PRESSURE LINES.
	7:30 - 8:51	1.35	COMP	36	E	P		PRIME PUMPS & LINES, TEST LINES TO 9479 PSI, LOST 135 PSI IN 15 MIN. SET POPOFF TO 8500 PSI, SET KICK OUT ON PUMPS. 2 @ 8800 PSI, 4 @ 8900 PSI. ( STG #1 ) WHP 2406 PSI, BRK 4920 PSI @ 4.8 BPM, ISIP 3696 PSI, FG .77. SPOT ACID ON PERFS LET SOAK FOR 5 MIN. PUMP 100 BBLS @ 50.6 BPM, @ 7266 PSI = 83% PERFS OPEN. MP 8019 PSI, MR 52.0 BPM, AP 7237 PSI, AR 50.7 BPM, ISIP 4121 PSI, FG 80 . NPI 425 PSI.

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-17F

Spud Date: 4/21/2012

Project: UTAH-UINTAH

Site: NBU 921-17F

Rig Name No: SWABBCO 8/8

Event: COMPLETION

Start Date: 9/11/2012

End Date: 9/19/2012

Active Datum: RKB @4,843.00usft (above Mean Sea Level)

UWI: SE/NW0/9/S/21/E/17/0/0/26/PM/N/2406/VW0/1570/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	8:51 - 11:31	2.67	COMP	36	E	P		( STG #2 ) RIH W/ 31/8 EXP 23 GRM, .36" 120 DEG PHASING GUNS & 41/2 HAL 8-K CBP & SET @ 11,255',PERF WELL AS OF PROCEDURE, WHP 1849 PSI, BRK 5232 PSI @ 4.6 BPM, ISIP 4100 PSI, FG .81. PUMP 100 BBLS @ 49.4 BPM, @ 6836 PSI = 100% PERFS OPEN. MP 8152 PSI, MR 52.2 BPM, AP 6747 PSI, AR 50.6 BPM, ISIP 3955 PSI, FG 79 . NPI -145 PSI.
	11:31 - 14:25	2.90	COMP	36	E	P		( STG #3 ) RIH W/ 31/8 EXP 23 GRM, .36" 120 DEG PHASING GUNS & 41/2 HAL 8-K CBP & SET @ 11,117',PERF WELL AS OF PROCEDURE, WHP 3590 PSI, BRK 4324 PSI @ 5.0 BPM, ISIP 3901 PSI, FG .79. PUMP 100 BBLS @ 51.8 BPM, @ 6796 PSI = 100% PERFS OPEN. MP 8050 PSI, MR 52.1 BPM, AP 6924 PSI, AR 51.4 BPM, ISIP 4005 PSI, FG 80 . NPI 104 PSI.
	14:25 - 16:00	1.58	COMP	36	E	P		( STG #4 ) RIH W/ 31/8 EXP 23 GRM, .36" 120 DEG PHASING GUNS & 41/2 HAL 8-K CBP & SET @ 9927',PERF WELL AS OF PROCEDURE, WHP 1273 PSI, BRK 4146 PSI @ 5.3 BPM, ISIP 2984 PSI, FG .74. PUMP 100 BBLS @ 50.1 BPM, @ 5450 PSI = 100% PERFS OPEN. MP 5830 PSI, MR 50.7 BPM, AP 5497 PSI, AR 50.0 BPM, ISIP 3227 PSI, FG 77 . NPI 243 PSI.
	16:00 - 19:30	3.50	COMP	36	E	P		( STG #5 ) RIH W/ 31/8 EXP 23 GRM, .36" 120 DEG PHASING GUNS & 41/2 HAL 8-K CBP & SET @ 9344',PERF WELL AS OF PROCEDURE, WHP 587 PSI, BRK 3474 PSI @ 5.0 BPM, ISIP 2600 PSI, FG .72. PUMP 100 BBLS @ 50.1 BPM, @ 5607 PSI = 88% PERFS OPEN. MP 6018 PSI, MR 50.3 BPM, AP 5268 PSI, AR 49.4 BPM, ISIP 3060 PSI, FG 77 . NPI 460 PSI.  ( KILL PLUG ) RIH W/ 41/2 8-K CBP & SET @ 9052' POOH SWI, RD WL & FRAC CREW SDFN.  TOTAL 217,020 LBS 30/50 TLC TOTAL 26,766 LBS 30/50 OTTAWA TOTAL 9980 BBLS WTR TOTAL 152 GALS BIOCID TOTAL 202 GALS SCALE INH TOTAL 3390 GALS DIESEL FRAC CREW HSM, TRIPPING TBG FROM DERICK.
9/19/2012	7:00 - 7:30	0.50	COMP	48		P		
	7:30 - 10:30	3.00	COMP	31	I	P		SICP 0, ND FV, NU 10-K BOPS. RU FLOOR & TBG EQUIP. RIH W/ 37/8 BIT, POBS, 1.875 X/N & 284 JTS 23/8 P-110 OUT OF DERICK, RU DRLG EQUIP.

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-17F

Spud Date: 4/21/2012

Project: UTAH-UINTAH

Site: NBU 921-17F

Rig Name No: SWABBCO 8/8

Event: COMPLETION

Start Date: 9/11/2012

End Date: 9/19/2012

Active Datum: RKB @4,843.00usft (above Mean Sea Level)

UWI: SE/NW0/9/S/21/E/17/0/0/26/PM/N/2406/W/0/1570/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	10:30 - 16:30	6.00	COMP	44	C	P		<p>BROKE CIRC CONV. RIH</p> <p>C/O 10' SAND TAG 1ST PLG @ 9052' DRL PLG IN 7 MIN 900 PSI INCREASE RIH.</p> <p>C/O 15' SAND TAG 2ND PLG @ 9344' DRL PLG IN 5 MIN 1500 PSI INCREASE RIH.</p> <p>C/O 10' SAND TAG 3RD PLG @ 9927' DRL PLG IN 7 MIN 2300 PSI INCREASE RIH.</p> <p>C/O 10' SAND TAG 4TH PLG @ 11,117' DRL PLG IN 7 MIN 800 PSI INCREASE RIH.</p> <p>C/O 30' SAND TAG 5TH PLG @ 11,255' DRL PLG IN 5 MIN 900 PSI INCREASE RIH</p> <p>C/O TO @ 11,360' DRILLING CMT,CIRC CLN, HANG SWIVEL, L/D 8 JTS 23/8, LAND TBG ND BOPS NU WH, TEST LINE TO SEP, PUMP OFF BIT, LET WELL SET FOR 30 MIN FOR BIT TO FALL. TURN WELL OVER TO FB CREW.</p> <p>KB = 19' (</p> <p>SURFACE OPEN &amp; LOCKED )</p> <p>41/16 CAMERON HANGER = .83' SICP</p> <p>3450# FTP 100 #</p> <p>350 JTS 23/8 P-110 = 11,091.72'</p> <p>POBS W/ 1.875 X/N = 2.20'</p> <p>EOT @ 11,113.75'</p> <p>TWTR 10,160 BBLS</p> <p>TWR 1200 BBLS</p> <p>TWLTR 8960 BBLS</p> <p>365 JTS HAULED OUT</p> <p>350 JTS LANDED</p> <p>15 JTS TO SAMUELS YARD</p> <p>WELL TURNED TO SALES @ 1630 HR ON</p> <p>9/19/2012. 968 MCFD, 1920 BWPD, FCP 3300#, FTP 2700#, 20/64" CK.</p>
	16:30 - 16:30	0.00	COMP	50				



WELL DETAILS: NBU 921-17F

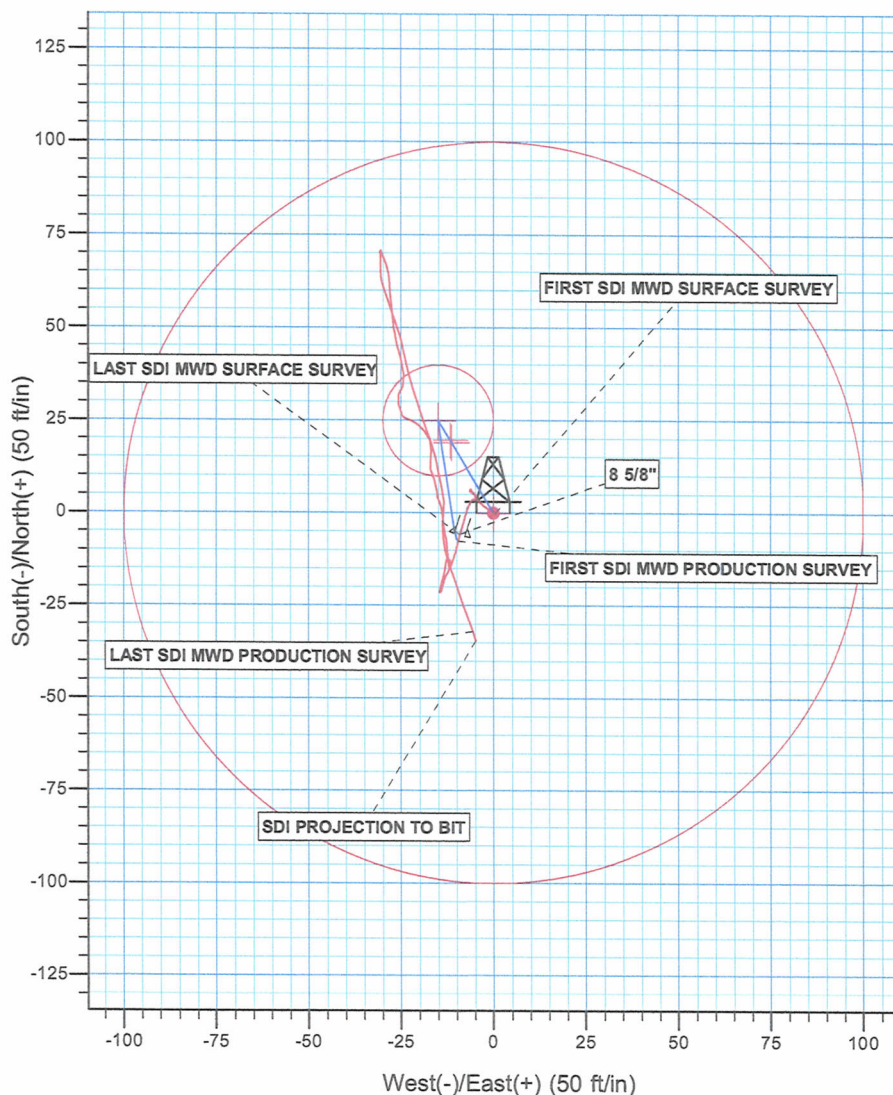
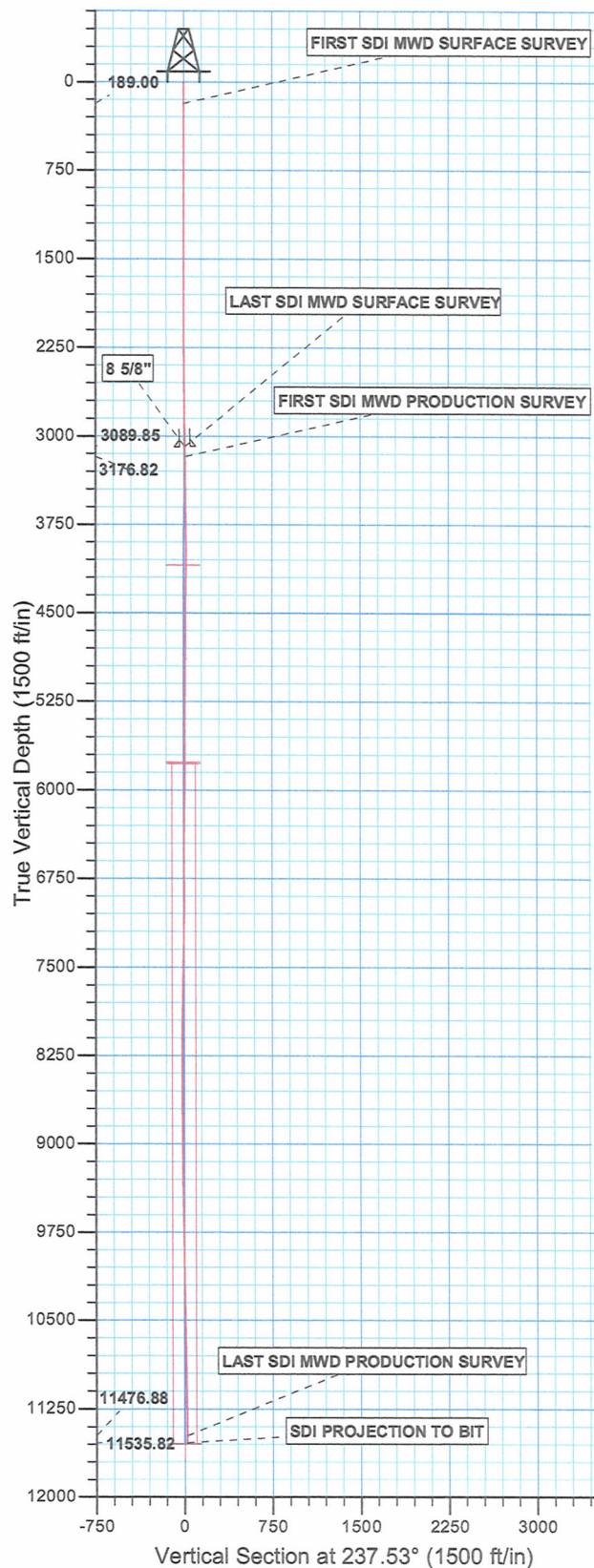
GL 4824 & KB 19 @ 4843.00ft (PIONEER 54)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14542625.80	2038239.44	40.036819	-109.578762



Azimuths to True North  
Magnetic North: 11.01°

Magnetic Field  
Strength: 52255.9snT  
Dip Angle: 65.86°  
Date: 04/16/2012  
Model: IGRF2010



PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)  
Datum: NAD 1927 (NADCON CONUS)  
Ellipsoid: Clarke 1866  
Zone: Zone 12N (114 W to 108 W)  
Location: SECTION 17 T9S R21E  
System Datum: Mean Sea Level

Design: OH (NBU 921-17F/OH)

Created By: Gabe Kendall Date: 10:56, July 31 2012



## **US ROCKIES REGION PLANNING**

**UTAH - UTM (feet), NAD27, Zone 12N**

**NBU 921-17F**

**NBU 921-17F**

**OH**

**Design: OH**

## **Standard Survey Report**

**31 July, 2012**

**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
**Site:** NBU 921-17F  
**Well:** NBU 921-17F  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-17F  
**TVD Reference:** GL 4824 & KB 19 @ 4843.00ft (PIONEER 54)  
**MD Reference:** GL 4824 & KB 19 @ 4843.00ft (PIONEER 54)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 5000.1 Single User Db

<b>Project</b>	UTAH - UTM (feet), NAD27, Zone 12N		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

<b>Site</b>	NBU 921-17F, SECTION 17 T9S R21E			
<b>Site Position:</b>		<b>Northing:</b>	14,542,625.79 usft	<b>Latitude:</b> 40.036819
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,038,239.44 usft	<b>Longitude:</b> -109.578762
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> 0.91 °

<b>Well</b>	NBU 921-17F, 2406 FNL 1570 FWL			
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	14,542,625.79 usft
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,038,239.44 usft
<b>Position Uncertainty</b>	0.00 ft		<b>Wellhead Elevation:</b>	ft
			<b>Ground Level:</b>	4,824.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	04/16/12	11.01	65.86	52,256

<b>Design</b>	OH				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	237.53	

<b>Survey Program</b>	<b>Date</b>	07/31/12			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
15.00	3,090.00	Survey #1 SDI MWD SURFACE (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	
3,177.00	11,540.00	Survey #2 SDI MWD PRODUCTION (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	

<b>Survey</b>									
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.00	0.00	0.00	15.00	0.00	0.00	0.00	0.00	0.00	0.00
189.00	0.35	120.78	189.00	-0.27	0.46	-0.24	0.20	0.20	0.00
<b>FIRST SDI MWD SURFACE SURVEY</b>									
276.00	0.62	163.06	276.00	-0.86	0.82	-0.23	0.50	0.31	48.60
359.00	0.35	269.93	358.99	-1.29	0.70	0.10	0.96	-0.33	128.76
450.00	0.58	321.02	449.99	-0.93	0.13	0.39	0.50	0.25	56.14
540.00	0.53	319.85	539.99	-0.26	-0.42	0.50	0.06	-0.06	-1.30
630.00	0.76	322.71	629.98	0.53	-1.05	0.60	0.26	0.26	3.18
720.00	0.61	312.15	719.97	1.33	-1.77	0.78	0.22	-0.17	-11.73

**Company:** US ROCKIES REGION PLANNING  
**Project:** UTAH - UTM (feet), NAD27, Zone 12N  
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**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-17F  
**TVD Reference:** GL 4824 & KB 19 @ 4843.00ft (PIONEER 54)  
**MD Reference:** GL 4824 & KB 19 @ 4843.00ft (PIONEER 54)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 5000.1 Single User Db

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
810.00	0.70	306.06	809.97	1.98	-2.57	1.11	0.13	0.10	-6.77
900.00	0.62	300.08	899.96	2.54	-3.44	1.53	0.12	-0.09	-6.64
990.00	1.21	326.31	989.95	3.58	-4.38	1.78	0.79	0.66	29.14
1,080.00	0.79	339.45	1,079.94	4.95	-5.13	1.67	0.53	-0.47	14.60
1,170.00	0.44	297.53	1,169.93	5.69	-5.65	1.71	0.61	-0.39	-46.58
1,260.00	0.35	246.11	1,259.93	5.74	-6.21	2.16	0.39	-0.10	-57.13
1,350.00	0.37	21.00	1,349.93	5.90	-6.36	2.20	0.74	0.02	149.88
1,440.00	0.26	24.10	1,439.93	6.36	-6.17	1.79	0.12	-0.12	3.44
1,530.00	0.18	188.81	1,529.93	6.40	-6.11	1.72	0.48	-0.09	183.01
1,620.00	0.18	140.03	1,619.93	6.16	-6.04	1.79	0.17	0.00	-54.20
1,710.00	0.21	143.29	1,709.93	5.92	-5.85	1.76	0.04	0.03	3.62
1,800.00	0.26	132.75	1,799.93	5.64	-5.60	1.70	0.07	0.06	-11.71
1,890.00	0.35	147.59	1,889.93	5.27	-5.30	1.64	0.13	0.10	16.49
1,980.00	0.35	138.53	1,979.92	4.84	-4.98	1.60	0.06	0.00	-10.07
2,070.00	0.51	166.72	2,069.92	4.24	-4.70	1.69	0.29	0.18	31.32
2,160.00	0.17	297.09	2,159.92	3.91	-4.73	1.89	0.70	-0.38	144.86
2,250.00	0.34	241.23	2,249.92	3.84	-5.08	2.22	0.31	0.19	-62.07
2,340.00	0.40	239.37	2,339.92	3.55	-5.59	2.80	0.07	0.07	-2.07
2,430.00	0.53	214.23	2,429.91	3.05	-6.09	3.50	0.27	0.14	-27.93
2,520.00	0.79	211.04	2,519.91	2.17	-6.64	4.44	0.29	0.29	-3.54
2,610.00	0.53	198.04	2,609.90	1.25	-7.09	5.31	0.33	-0.29	-14.44
2,700.00	0.70	188.90	2,699.90	0.31	-7.31	6.00	0.22	0.19	-10.16
2,790.00	0.88	204.98	2,789.89	-0.86	-7.68	6.94	0.32	0.20	17.87
2,880.00	1.11	190.83	2,879.88	-2.34	-8.14	8.13	0.37	0.26	-15.72
2,970.00	0.97	196.89	2,969.86	-3.93	-8.52	9.30	0.20	-0.16	6.73
3,090.00	0.88	196.89	3,089.85	-5.78	-9.09	10.77	0.08	-0.08	0.00
<b>LAST SDI MWD SURFACE SURVEY</b>									
3,177.00	1.64	194.52	3,176.82	-7.63	-9.59	12.19	0.88	0.87	-2.72
<b>FIRST SDI MWD PRODUCTION SURVEY</b>									
3,272.00	1.67	196.86	3,271.78	-10.27	-10.34	14.23	0.08	0.03	2.46
3,366.00	1.74	196.11	3,365.74	-12.95	-11.13	16.34	0.08	0.07	-0.80
3,461.00	0.26	238.96	3,460.73	-14.45	-11.71	17.64	1.64	-1.56	45.11
3,556.00	0.88	198.97	3,555.72	-15.25	-12.14	18.42	0.74	0.65	-42.09
3,651.00	0.66	207.28	3,650.71	-16.42	-12.62	19.47	0.26	-0.23	8.75
3,746.00	0.44	211.45	3,745.71	-17.22	-13.06	20.27	0.24	-0.23	4.39
3,840.00	1.06	195.63	3,839.70	-18.37	-13.49	21.24	0.69	0.66	-16.83
3,936.00	1.67	196.07	3,935.67	-20.57	-14.11	22.95	0.84	0.64	0.46
4,031.00	0.64	343.71	4,030.66	-21.39	-14.65	23.84	2.35	-1.08	155.41
4,125.00	1.93	19.85	4,124.64	-19.39	-14.26	22.44	1.56	1.37	38.45
4,220.00	1.54	10.07	4,219.59	-16.63	-13.49	20.31	0.51	-0.41	-10.29
4,315.00	0.83	11.92	4,314.57	-14.70	-13.12	18.97	0.75	-0.75	1.95
4,410.00	0.79	10.27	4,409.56	-13.39	-12.86	18.04	0.05	-0.04	-1.74
4,505.00	0.26	353.31	4,504.56	-12.53	-12.77	17.50	0.58	-0.56	-17.85

**Company:** US ROCKIES REGION PLANNING  
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**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-17F  
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**MD Reference:** GL 4824 & KB 19 @ 4843.00ft (PIONEER 54)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 5000.1 Single User Db

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
4,600.00	0.44	107.30	4,599.56	-12.42	-12.45	17.17	0.63	0.19	119.99	
4,694.00	0.26	119.61	4,693.56	-12.63	-11.92	16.84	0.21	-0.19	13.10	
4,789.00	0.79	170.32	4,788.55	-13.39	-11.62	16.99	0.69	0.56	53.38	
4,883.00	1.06	190.01	4,882.54	-14.88	-11.66	17.83	0.44	0.29	20.95	
4,978.00	1.23	347.42	4,977.53	-14.75	-12.04	18.08	2.36	0.18	165.69	
5,074.00	2.73	357.53	5,073.47	-11.46	-12.36	16.58	1.60	1.56	10.53	
5,169.00	2.20	348.56	5,168.38	-7.41	-12.82	14.80	0.69	-0.56	-9.44	
5,263.00	2.11	351.90	5,262.32	-3.93	-13.42	13.44	0.16	-0.10	3.55	
5,358.00	1.49	355.33	5,357.27	-0.97	-13.77	12.14	0.66	-0.65	3.61	
5,452.00	1.32	349.53	5,451.24	1.31	-14.07	11.16	0.24	-0.18	-6.17	
5,547.00	0.79	329.58	5,546.23	2.95	-14.60	10.73	0.67	-0.56	-21.00	
5,642.00	0.70	347.24	5,641.22	4.08	-15.06	10.51	0.26	-0.09	18.59	
5,737.00	0.18	354.54	5,736.22	4.80	-15.20	10.25	0.55	-0.55	7.68	
5,832.00	0.10	84.09	5,831.22	4.96	-15.13	10.10	0.22	-0.08	94.26	
5,927.00	1.76	345.49	5,926.20	6.38	-15.41	9.58	1.87	1.75	-103.79	
6,022.00	1.43	343.15	6,021.16	8.92	-16.12	8.81	0.35	-0.35	-2.46	
6,117.00	0.97	335.03	6,116.14	10.79	-16.81	8.39	0.52	-0.48	-8.55	
6,212.00	2.30	1.49	6,211.10	13.42	-17.10	7.22	1.57	1.40	27.85	
6,306.00	1.93	5.52	6,305.04	16.88	-16.89	5.19	0.42	-0.39	4.29	
6,401.00	1.61	341.01	6,399.99	19.74	-17.18	3.89	0.86	-0.34	-25.80	
6,496.00	1.85	315.08	6,494.95	22.09	-18.69	3.91	0.85	0.25	-27.29	
6,590.00	1.35	310.21	6,588.92	23.87	-20.61	4.57	0.55	-0.53	-5.18	
6,685.00	1.23	293.72	6,683.89	25.01	-22.40	5.47	0.41	-0.13	-17.36	
6,780.00	0.97	293.89	6,778.87	25.74	-24.07	6.48	0.27	-0.27	0.18	
6,875.00	1.49	346.98	6,873.85	27.27	-25.08	6.52	1.26	0.55	55.88	
6,970.00	1.32	335.73	6,968.83	29.47	-25.81	5.95	0.34	-0.18	-11.84	
7,065.00	1.93	20.20	7,063.79	31.97	-25.71	4.52	1.42	0.64	46.81	
7,160.00	1.14	34.70	7,158.76	34.25	-24.61	2.38	0.92	-0.83	15.26	
7,255.00	2.99	352.78	7,253.70	37.49	-24.39	0.45	2.39	1.95	-44.13	
7,350.00	2.46	344.26	7,348.59	41.91	-25.25	-1.19	0.70	-0.56	-8.97	
7,445.00	2.02	347.77	7,443.52	45.51	-26.16	-2.36	0.48	-0.46	3.69	
7,540.00	1.41	343.99	7,538.47	48.26	-26.84	-3.27	0.65	-0.64	-3.98	
7,634.00	2.99	356.12	7,632.40	51.82	-27.32	-4.77	1.74	1.68	12.90	
7,729.00	2.55	355.07	7,727.29	56.40	-27.67	-6.94	0.47	-0.46	-1.11	
7,824.00	1.76	353.04	7,822.22	59.95	-28.03	-8.54	0.84	-0.83	-2.14	
7,919.00	1.58	355.51	7,917.18	62.71	-28.31	-9.78	0.20	-0.19	2.60	
8,014.00	1.32	353.40	8,012.15	65.10	-28.54	-10.88	0.28	-0.27	-2.22	
8,109.00	1.06	335.99	8,107.13	66.99	-29.02	-11.48	0.47	-0.27	-18.33	
8,204.00	0.81	336.79	8,202.12	68.41	-29.64	-11.72	0.26	-0.26	0.84	
8,299.00	0.74	342.61	8,297.11	69.61	-30.09	-11.99	0.11	-0.07	6.13	
8,394.00	0.19	329.65	8,392.11	70.33	-30.35	-12.15	0.59	-0.58	-13.64	
8,489.00	0.26	352.78	8,487.10	70.68	-30.46	-12.25	0.12	0.07	24.35	
8,583.00	0.09	218.40	8,581.10	70.84	-30.53	-12.27	0.35	-0.18	-142.96	
8,678.00	0.40	196.22	8,676.10	70.46	-30.67	-11.95	0.34	0.33	-23.35	

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**Well:** NBU 921-17F  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-17F  
**TVD Reference:** GL 4824 & KB 19 @ 4843.00ft (PIONEER 54)  
**MD Reference:** GL 4824 & KB 19 @ 4843.00ft (PIONEER 54)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 5000.1 Single User Db

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,773.00	0.70	166.89	8,771.10	69.58	-30.63	-11.51	0.42	0.32	-30.87
8,868.00	0.62	186.05	8,866.09	68.50	-30.56	-11.00	0.25	-0.08	20.17
8,963.00	1.23	179.20	8,961.08	66.97	-30.60	-10.14	0.65	0.64	-7.21
9,057.00	1.14	175.77	9,055.06	65.03	-30.51	-9.17	0.12	-0.10	-3.65
9,152.00	1.14	177.53	9,150.04	63.14	-30.40	-8.25	0.04	0.00	1.85
9,247.00	1.49	159.33	9,245.02	61.04	-29.93	-7.53	0.57	0.37	-19.16
9,341.00	1.76	160.74	9,338.98	58.54	-29.02	-6.95	0.29	0.29	1.50
9,436.00	2.37	162.85	9,433.92	55.28	-27.96	-6.09	0.65	0.64	2.22
9,531.00	2.69	158.93	9,528.82	51.32	-26.58	-5.13	0.38	0.34	-4.13
9,626.00	2.55	164.61	9,623.72	47.21	-25.21	-4.07	0.31	-0.15	5.98
9,721.00	2.81	168.39	9,718.62	42.89	-24.19	-2.62	0.33	0.27	3.98
9,816.00	2.73	165.75	9,813.51	38.41	-23.16	-1.09	0.16	-0.08	-2.78
9,910.00	3.08	164.69	9,907.39	33.81	-21.94	0.36	0.38	0.37	-1.13
10,005.00	3.17	161.62	10,002.25	28.85	-20.44	1.75	0.20	0.09	-3.23
10,100.00	3.06	159.25	10,097.11	23.99	-18.71	2.91	0.18	-0.12	-2.49
10,195.00	2.81	161.44	10,191.98	19.41	-17.07	3.98	0.29	-0.26	2.31
10,289.00	2.73	166.98	10,285.87	15.05	-15.84	5.28	0.30	-0.09	5.89
10,383.00	2.64	168.91	10,379.77	10.74	-14.92	6.82	0.14	-0.10	2.05
10,478.00	2.34	165.37	10,474.68	6.72	-14.00	8.21	0.35	-0.32	-3.73
10,573.00	2.02	177.35	10,569.61	3.17	-13.44	9.63	0.58	-0.34	12.61
10,667.00	2.06	186.54	10,663.55	-0.16	-13.55	11.52	0.35	0.04	9.78
10,763.00	1.85	176.82	10,759.50	-3.43	-13.66	13.37	0.41	-0.22	-10.13
10,857.00	2.02	179.02	10,853.44	-6.60	-13.55	14.97	0.20	0.18	2.34
10,952.00	2.29	166.80	10,948.38	-10.12	-13.09	16.48	0.56	0.28	-12.86
11,047.00	2.55	162.06	11,043.29	-13.98	-12.00	17.63	0.35	0.27	-4.99
11,142.00	2.58	159.48	11,138.20	-17.99	-10.60	18.61	0.13	0.03	-2.72
11,236.00	2.46	163.02	11,232.11	-21.90	-9.27	19.58	0.21	-0.13	3.77
11,331.00	2.47	160.32	11,327.02	-25.78	-7.99	20.58	0.12	0.01	-2.84
11,426.00	2.48	156.34	11,421.93	-29.59	-6.47	21.35	0.18	0.01	-4.19
11,481.00	2.55	161.18	11,476.88	-31.84	-5.60	21.82	0.41	0.13	8.80
<b>LAST SDI MWD PRODUCTION SURVEY</b>									
11,540.00	2.55	161.18	11,535.82	-34.32	-4.76	22.44	0.00	0.00	0.00
<b>SDI PROJECTION TO BIT</b>									

**Casing Points**

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
3,090.00	3,089.85	8 5/8"	8.625	11.000



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**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 5000.1 Single User Db

**Design Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
189.00	189.00	-0.27	0.46	FIRST SDI MWD SURFACE SURVEY
3,090.00	3,089.85	-5.78	-9.09	LAST SDI MWD SURFACE SURVEY
3,177.00	3,176.82	-7.63	-9.59	FIRST SDI MWD PRODUCTION SURVEY
11,481.00	11,476.88	-31.84	-5.60	LAST SDI MWD PRODUCTION SURVEY
11,540.00	11,535.82	-34.32	-4.76	SDI PROJECTION TO BIT

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_